



THE

Roundel

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NOVEMBER 1962





THE

Roundel

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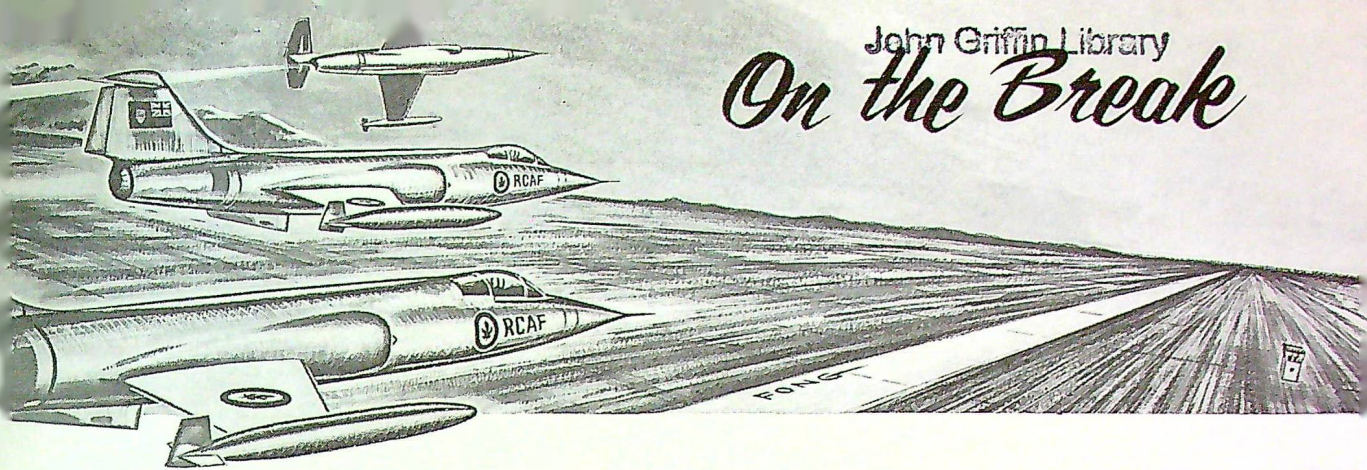
Editor, THE ROUNDel,
RCAF Victoria Island,
Ottawa, Ont.



THIS MONTH'S COVER

An RCAF bugler, silhouetted against the sky in a military cemetery near Ottawa, embodies the spirit of remembrance with which Canadians in every town and village of Canada will mark 11 November. Local ceremonies across the land will commemorate those who made the supreme sacrifice for their country in the two great wars for freedom.

Views expressed in THE ROUNDel are those of the writers expressing them. They do not necessarily reflect the official opinions of the Royal Canadian Air Force.



UNDoubtedly many of our United States neighbours have become much more conscious of Canada's armed services and defence research capabilities this fall than they ever were before. A few weeks before the 1962 World's Fair closed its six-month run last month a multi-service presentation highlighted Canada Week in Seattle (page 2). As a result, the fair's attendance figures increased tremendously and the reputation of our navy, army, air force and RCMP did likewise.

Meantime, also on the west coast, preparations were being completed for the launching of Canada's first satellite, the Alouette. Its successful firing into orbit on 29 September (page 4) brought high praise for DRB scientists from US authorities and opened a new phase in man's investigations of outer space.

ON page 7 we present the first part of a new serial giving long-overdue publicity to an important but virtually unknown chapter in Canada's aviation history. "Canada's First Air Training Plan" is a story THE **ROUNDEL** has been eager to publish for years, and comes now only after long research by Mr. R. V. Dodds of the air historian's staff.

A World War II *Mosquito* observer, Mr. Dodds became the RCAF's director of public relations in 1945, then did a tour as staff officer public relations at No. 1 Air Div. HQ., Metz, before joining the historical section.



RCRAF Station Torbay, which "comes of age" this month, is probably unique in several ways among RCAF establishments. For one thing, it's the most easterly Canadian station in the RCAF; it's probably

the least-known of all places in Canada where RCAF personnel are serving, and, finally, it's the one location where you can be sure of a bumper crop of snow every winter.

All this is one way of saying that things haven't changed very much at Torbay. "Operation John Cabot," by A/C M. P. Martyn (page 22) gives an eye-witness account of how Torbay became an RCAF station in November 1941. Air Commodore Martyn now serves as chief of personnel at AFHQ.




Nowadays No. 107 Rescue Unit at Torbay is involved in the same type of work as described in "Operation Charlie" (page 15) by Sgt. P. N. Ellis of RCAF Station Winnipeg. To Sgt. Ellis, an air traffic control assistant, being involved with searchers for missing aircraft or lost hunters, is part of his job. In this hypothetical story he gives a new insight into this humanitarian role, and incidentally, pays deserved credit to the volunteers who make up the RCAF's land search parties across Canada.

FINALLY, we must comment on the 12th annual convention of the RCAF Association (page 26) whose meeting in Halifax more than lived up to expectations, even though it rained for the four days. Cheer up, delegates, next year we'll see you in Vancouver where the sun shines all the time.

A. J. Paton 5/2

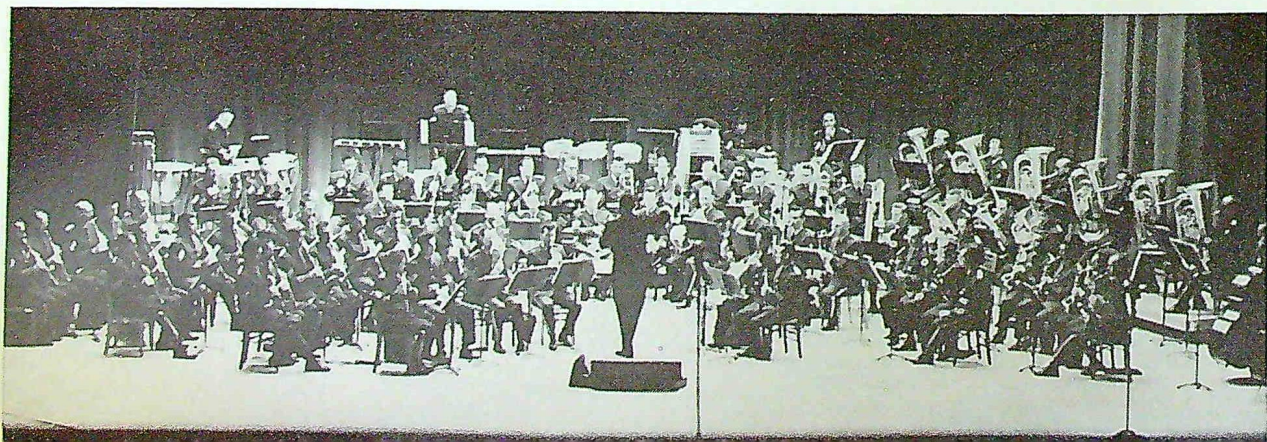
Editor.

An aerial photograph of the Seattle World's Fair. In the foreground, four RCAF Golden Hawk jets are flying in a formation, their wings and tails clearly visible. The jets are flying over the fairgrounds, which are filled with various buildings and structures. In the background, the city of Seattle is visible, with the iconic Space Needle tower standing prominently on the right side. The overall scene captures the excitement and scale of the event.

Canada On Parade At The World's Fair

Above: The RCAF Golden Hawks, camouflaged by the buildings at the Seattle World's Fair, take a close look at the space needle. The Hawks gave seven shows over Lake Washington during Canada Week, witnessed by hundreds of thousands. Sand Point Naval Air Station was their home for the week.

Below: The 100-piece "Band of the RCAF", conducted by S/L C. O. Hunt, packed the 3000-seat Opera House at the World's Fair for five afternoon concerts. They also provided a marching and static unit for the evening tattoos. RCAF Stn. Rockcliffe pipe band won the hearts of fair visitors in these events as well.





Above: Space needle-view of the illuminated RCN destroyer-escorts from the 2nd Canadian Escort Sqn. of Pacific Command, Esquimalt. The ships were anchored in Seattle Harbour and held "open house" during Canada Week. The Navy also participated in the evening tattoos at the fairgrounds.

Below: 650 men of the Navy, Army, Air Force and RCMP assembled for the finale to the Canadian Tattoo, which drew capacity audiences each night. The combined services' tattoo, described as "the biggest thing to hit the World's Fair," was performed against a background replica of the Citadel of old Quebec.



ALOUETTE

Photos by Mr. C. R. Yoc

THE Alouette, Canada's first satellite and the first satellite completely designed and built by a nation other than the US or the USSR, is living up to expectations.

Launched from Vandenberg Air Force Base in California, on 29 September, Alouette is telemetering back scientific information as it orbits the earth approximately every 105 minutes at an altitude of roughly 600 miles.

The Defence Research Board-designed and built Alouette is primarily concerned with five experiments:

- probing the ionosphere below the satellite to measure the changing number of electrons in the ionosphere;
- measuring galactic or radio noise that appears to originate in outer space;
- measuring radio noise produced within the ionosphere itself;
- observing cosmic rays;
- investigating artificial radiation field created in space by recent nuclear tests.

In addition to Alouette being a "first" for Canada, it is also recording a few firsts for the US's National Aeronautics and Space Administration. This was the first occasion that NASA successfully accomplished an orbit from a west coast launch site and its first use of the Thor-Agena B vehicle.

The Canadian scientists responsible for the Alouette project, which is part of the international Top Side Sounder Program, are concerned primarily with the upper regions of the ionosphere above Canada's high latitudes. Some of the radiation directed from the sun towards the

N ORBIT

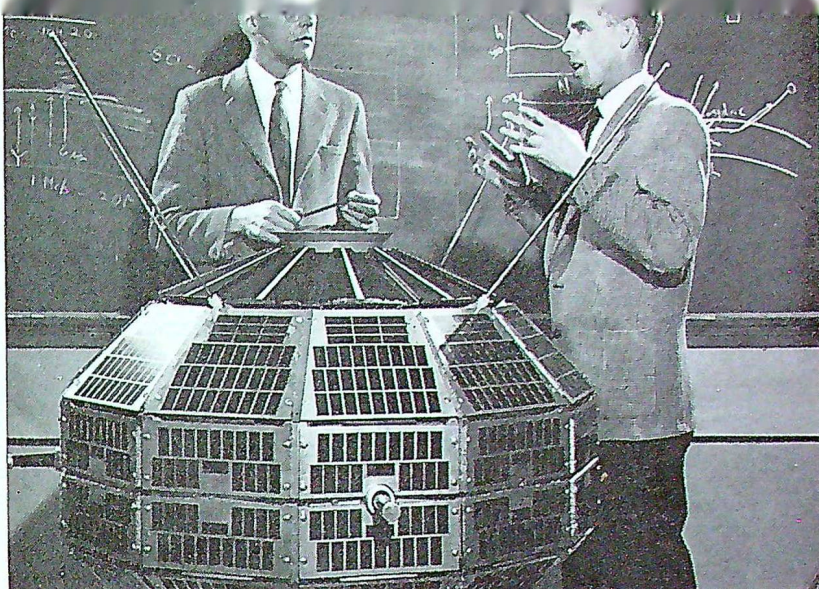
ence Research Board

earth is absorbed in the ionosphere which exists approximately 50 to 250 miles above the earth. During this absorption process, heat is produced and neutral air particles split into electrically-charged ions and electrons. They create, in effect, an electrical conductor with the ability to reflect waves from radio transmitters to receivers.

When the ionosphere becomes excited following solar storms or other phenomena associated with the sun, its reflecting properties lessen or disappear temporarily. Consequently, radio communications are disrupted, sometimes for lengthy periods. Hence, the deep interest of Canadian scientists in studying the upper atmosphere in order to find methods of overcoming the effects of ionospheric disturbances. An unusual feature of the polar and sub-polar ionosphere stems from seasonal variations of the polar atmosphere's solar illumination — continuous daylight in summer and continuous night during the winter. A second feature of the ionosphere at high latitudes involves effects on ionization created by charged solar particles which apparently cause the auroral zones.

Perhaps the worst ionospheric condition, from the standpoint of communications, is the so-called "polar blackout". During such occurrences, reflections cannot be obtained from the ionosphere within the frequency range of ground-based ionosphere recorders. The effect on communications is a complete cessation of radio sky-wave transmissions at high frequencies.

This phenomenon is similar to the "sudden ionosphere disturbances"



Two members of DRB's Telecommunications Establishment, near Ottawa, discuss the Alouette (l. to r.): Dr. C. Franklin and Dr. J. Barry.

which produce abrupt and simultaneous radio fadeout throughout the hemisphere, and which may last from 10 minutes to an hour. Polar blackouts, however, are more gradual in their beginning and recovery and last for substantially longer periods — sometimes continuously during the daylight hours for several consecutive days.

In addition to its scientific value, the increased knowledge of the ionosphere is directly applicable to communications and tracking applications. Information from Alouette should enable scientists to predict the radio frequencies to be used so that long distance communications will not be interrupted.

Design and construction of the spacecraft was carried out by Canada's DRB with assistance from Canadian industry and NASA's Goddard Space Flight Center.* A fabrication technique, originated in Canada, gives the spacecraft a unique feature — a 150-foot radio antenna which is believed to be the longest to date in a space vehicle.

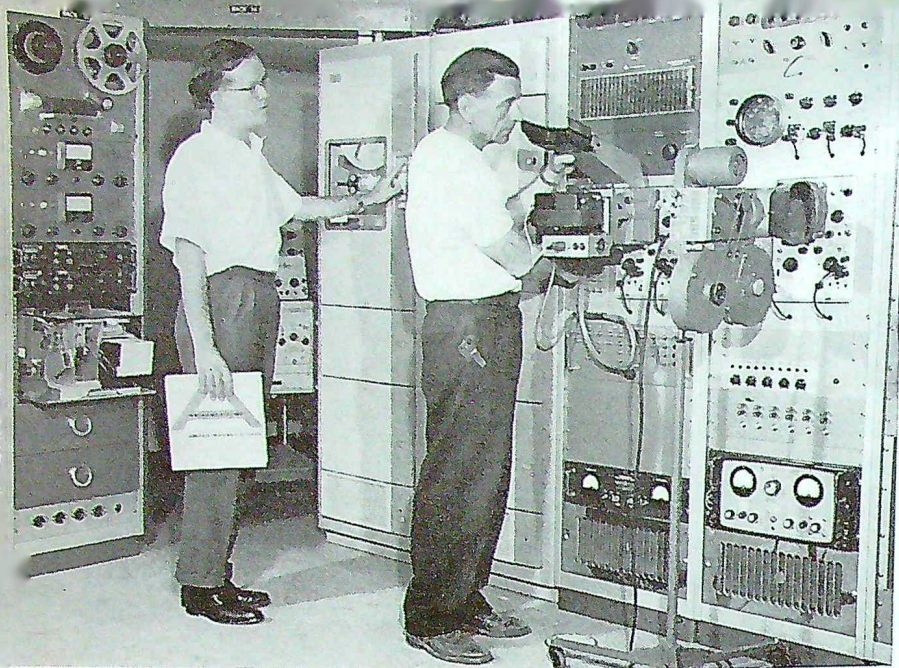
Scientific data from the Alouette are being obtained at 13 ground

stations. The world-wide locations of the telemetry stations which are collecting data further emphasizes the international flavour of the project. Three stations were constructed in Canada by DRB and are manned by Canadian personnel. Two stations, one at Singapore and the other in the South Atlantic, are operated by Great Britain. Eight of NASA's Minitrack stations are also tracking and recording data.

While Alouette's long antennae are sounding the top levels of the ionosphere from above, the lower layers are being sounded at various locations by ground-based equipment. Comparisons of the topside and bottomside results will help to establish the relationship sought by scientists.

Data collected by the telemetry stations are being forwarded to DRB's Telecommunication Establishment, at Shirley Bay near Ottawa, for reduction and analysis at a recently-established analysis centre. The scientific information obtained will apply directly to radio communications and will be forwarded to world data centres, where it will be freely available to scientists of all nations.

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Jul.-Aug. 60.

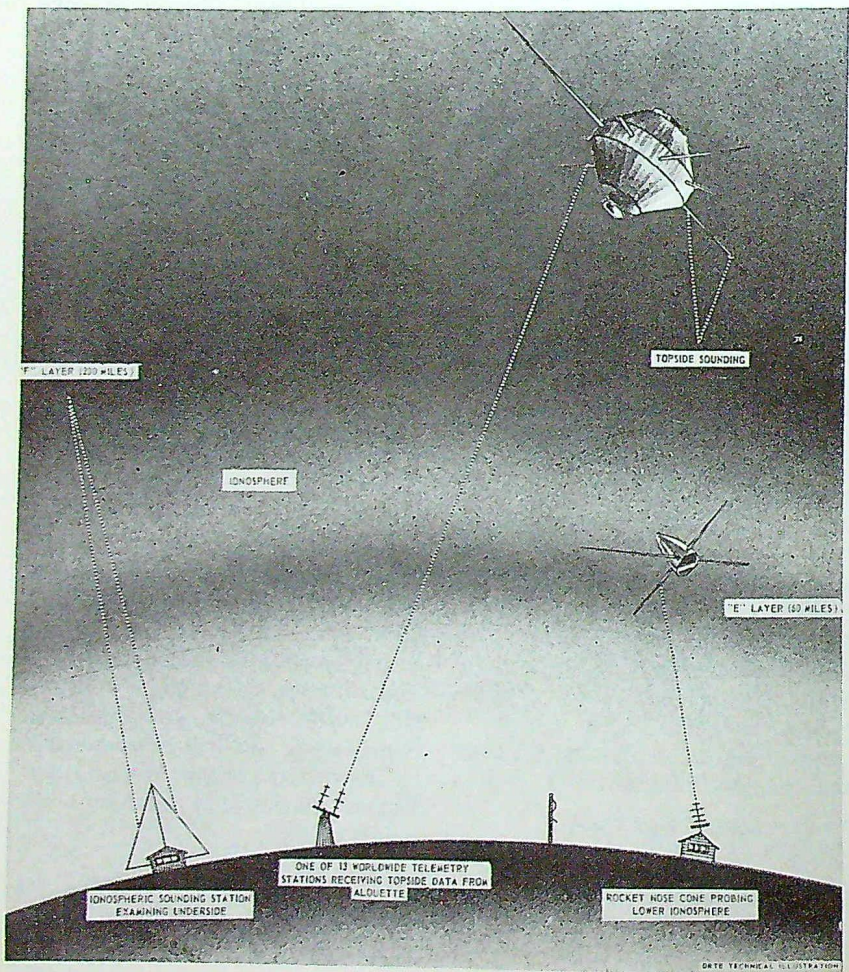


In a Defence Research Board laboratory, cameras which will be used for reproducing Alouette's scientific data on films, are tested (l. to r.): engineer E. A. Walker and technician R. Sigston.

For its part in this Canadian achievement, the RCAF contributed an airlift and communications facilities. Test models of the Alouette were flown to Washington for testing and later to Vandenburg for the actual firing. Equipment was flown to Resolute Bay where a tracking station was being set up and DRB personnel and equipment were airlifted to Vandenburg in preparation for launching of the satellite. In the telecommunications field, the RCAF extended its network from the Communications Control Headquarters at RCAF Station Rockcliffe to the DRB facilities at Shirley Bay. This hookup permitted DRB scientists to communicate directly with their research laboratory at Prince Albert, their tracking station at Resolute Bay and with their American colleagues throughout the US via the RCAF's relay network to Washington.

Mr. J. E. Jackson, speaking for the American scientists of NASA, says that Canada's satellite knowledge now matches that of the US. He said, "Alouette is not a 'me-too' experiment but quite a daring venture in a new field. With the successful launching of Alouette, Canada has achieved world leadership in this area."

The name Alouette comes from a high-flying songbird of the lark family which inhabits most of Canada. The Alouette produced by DRB is flying high, indeed, and its song is doubly sweet as it heralds Canada's entry into the space age.



In this diagram (left) DRB's ground based equipment examines the ionosphere's "F" layer; (centre) Alouette telemeters scientific data to a receiving station; (right) a DRB instrumented rocket nose cone telemeters information from the "E" layer to a ground station.



The Royal Flying Corps held its first Canadian church parade in Toronto in April 1917.

CANADA'S FIRST AIR TRAINING PLAN

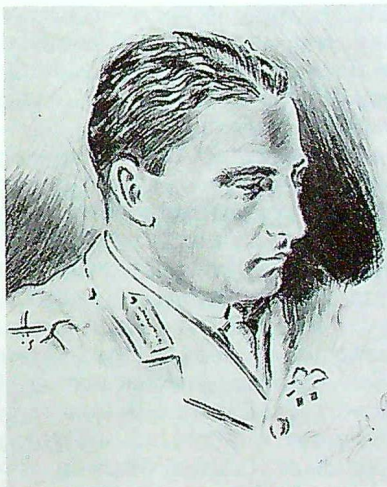
By MR. R. V. DODDS,

Air Historical Section

FIRST OF FOUR PARTS

To most Canadians World War II, with its famed British Commonwealth Air Training Plan, probably represents Canada's first experience with the mass training of pilots and other aircrew. Yet before many of the trainees of the BCATP were even born, Canadian pilots and observers were winning their wings in a large-scale flying training scheme operated in the Dominion.

The training scheme was set up and operated by the British Royal Flying Corps (after 1 April 1918, the Royal Air Force) at schools and fields built in southern Ontario, and produced 3,272 pilots and observers, most of them Canadian. By the end of World War I 9,200 cadets had been enlisted for training and the schools were turning out more than 280 pilots and observers a month. The plan cost almost



Brigadier-General C. G. Hoare, CMG,
General Officer Commanding, Royal
Air Force, Canada.

\$40,000,000 and on Armistice Day personnel strength, including staff members, instructors and trainees, was just under 12,000.

The young warbirds — their average age was 22 — were produced at a time when they were badly needed overseas. The plan's graduates included such illustrious names as MacLaren, Claxton, and McLeod, the last-named being one of the three Canadian aerial VC winners of the war.

An aircraft factory, Canadian Aeroplanes Limited, was closely associated with the training plan. Established in Toronto, the plant produced more than 2,900 machines during the last two years of the war, including most of the JN-4 trainers used by the RFC Canada flying schools.

Although a project of the British



A group of fledgling pilots at the civilian flying school in Toronto, 1916. Second from right is Wilfred Curtis (later, A/M Curtis, CB, CBE, DSC, and Chief of the Air Staff RCAF 1947-1953).

government, the training plan depended to a large degree on official Canadian assistance, as did the associated aircraft plant. The Canadian government provided land and many facilities in connection with flying fields and schools, and a great deal of continuing help was given by the Canadian Militia. Canada gave financial aid in creation of the aircraft plant, and its staff was Canadian.

The staff of the training schools became preponderantly Canadian, through feeding back pilot graduates, secondments of Canadian Militia officers, attachment of Canadians having flown with the RFC in France, and enlistments of ground personnel.

One facet of the training anticipated by more than 30 years the RCAF's NATO Training of the 1950s. Under an agreement with the United States Signal Corps, the RFC trained American flying and ground personnel and in return was provided with facilities in Texas to enable continuance of flying training through the winter of 1917-18.

The decision to establish training facilities in Canada followed two overseas developments. The RFC was heavily engaged in the bitter and prolonged Battle of the Somme during the latter part of 1916 and suffered its heaviest casualties since the beginning of the war. Late in the year the British government authorized a large expansion in the size of the RFC, adding to the requirement for more pilots.

Canada was selected because of a variety of factors and conditions. Compared with the other Dominions Canada was relatively close to Britain, and material, supplies and transport facilities were all available, as was skilled and unskilled manpower, at least to a larger degree than in Britain. A large reservoir of pilot material existed in Canada in the form of thousands of young Canadians who wanted to fly. Another factor, and probably an important one, was the remarkable flair that Canadians had shown for the newly-developed art of aerial warfare.

By the end of 1916 Canada was

well-represented in the Royal Naval Air Service and the Royal Flying Corps, but for the first two years of the war it was not an easy and straightforward matter for a Canadian youth to join either of the two British flying services as a pilot. Some of the Canadian flyers had gone overseas as members of the Canadian Expeditionary Force and had then been able to transfer to the RFC or RNAS, winning their wings at service flying schools abroad.

Others had joined one of the two flying services through recruiting carried out in Canada during 1915-16, although a prerequisite was that a Canadian recruit must have already obtained his pilot certificate, at his own expense, at a private flying school. Assuming that he was acceptable on other grounds, such a recruit was then sent overseas for military flying training. The RNAS relaxed this rule at an earlier date, but it was not until August 1916 that the RFC changed its policy. Postwar figures indicate that up to the beginning of 1917 fewer than 900 cadets and officers were sent to Britain for pilot training with the RFC or RNAS as the result of the limited British recruiting in Canada. The majority were recruited by the RNAS, and the total includes transfers from the Canadian forces in Canada as well as civilian recruits.

THE PRIVATE FLYING SCHOOLS

Some privately-operated flying schools were opened in Canada to provide instruction for those wishing to join one of the British flying services. Only one of these, the Curtiss school in Toronto, was a real flying school on a firm basis.

The Curtiss school was opened in May 1915 by the Curtiss Aeroplanes and Motors Limited of Toronto, whose managing director was J. A. D. McCurdy of *Silver Dart* fame. Associated with the Curtiss Aeroplane Company in the United States, the firm represented Canada's

first aircraft factory and first proper flying school. The aircraft plant produced planes for the British Admiralty and built most of the machines that its associated flying school used, in addition to doing sub-contracting work for the Curtiss company in the United States.

The school's first flying was done on a pair of Curtiss flying boats brought in from the United States, and which operated from Hanlan's Point, on one of the islands in Toronto harbour. Land operations were later started at Long Branch, on the Toronto outskirts, on JN-3 trainers built by the company's Toronto plant. With a break during the winter of 1915-16, the school operated through the summer of 1916 and produced 129 graduates. Partial training was given to more than 300 others, who were also accepted by the RNAS or RFC.

The school's pupils included many who went on to distinguished service careers. Two of them, Robert Leckie and Wilfred Curtis, became air marshals and served as RCAF chiefs of the air staff. Amongst the instructors were Bert Acosta, who after the war became one of America's best-known flyers, and Guy Gilpatric, who achieved international literary fame as the creator of the fictional character, Mr. Glencannon.

The Aero Club of British Columbia operated a flying school in the Vancouver area during roughly the same period, although on a much smaller scale. The club was formed during the summer of 1915 and purchased a 1912-model Curtiss single-seater biplane belonging to the pioneer British Columbia airman, William Stark, who had learned to fly before the war at the Curtiss School in San Diego, California. Stark gave instruction and flying was done at first on the Minoru Park race course on Lulu Island. Training started in September and continued until late November, when it packed up for the winter.



The Curtiss Flying School in Toronto (a civilian organization) began operations in the spring of 1915 with two flying boats. One of these is shown with a group of early students.

The club was re-organized and as the British Columbia Aviation School Ltd. got under way again in 1916 on a Curtiss two-seater which was built in Vancouver. The plane flew from a field near Coquitlam, some 25 miles east of Vancouver, and when it cracked up the school's operations came to an end. As far as is known, the school graduated only two certificated pilots, although a dozen or more received partial training. Both the graduates joined the RFC, and some of the others were successful in joining either the RFC or RNAS.

Other Canadians attended flying schools in the United States, including the Curtiss schools at San Diego, California and Norfolk, Virginia; the Wright school at Dayton, Ohio; the Thomas school at Ithaca, N.Y.; and the Stinson school at San Antonio, Texas. The Wright school at Dayton was amongst the most popular with the Canadians and it contributed 42 Canadian recruits to the RFC and RNAS.

Most of the schools set their fees at one dollar for each minute of

flying instruction, the standard fee at the Toronto Curtiss school being \$400. Charges at the American schools ranged from \$250 to \$650, depending on the length of the school's standard course, before the student was permitted to take one of the machines up on a solo flight, for his pilot certificate tests. Added to these charges were the cost of transportation and living expenses during the several months of training. Successful pupils received part of their money back if accepted by either the RFC or RNAS but this financial help came *after* they had completed the training and joined one of the flying services. Raising the money in the first place was their own responsibility and there was, of course, no guarantee that they would qualify to receive a refund of any sort.

The problem of flying training was further complicated by the existence of "flying schools" which pupils found, after having paid their money, to be shaky fly-by-night affairs. Such short-lived schools blossomed in both Toronto and

Montreal. One of the Toronto schools was operated by a man who, in the words of an RFC recruiting officer then in Canada, "accepted \$400 from a certain number of candidates, gave them a few days' training and then closed his school and disappeared".

THE GOVERNMENT PLAN

The idea of establishing a government-backed or operated flying school in Canada to provide pilots for the RNAS and RFC overseas was not new, and neither was the idea of a similarly-operated aircraft plant. The Canadian government had received proposals for establishment of an aviation school, with official support, from the very first days of the war, but little consideration had been given to them.

Early in 1916 the Imperial Munitions Board* became interested in the matter, and suggested to the British authorities that an aircraft plant and a flying school be set up in Canada. The proposal was discussed at length by the British and Canadian agencies concerned, and these discussions continued throughout the year. Eventually the Munitions Board prepared a plan which was approved by the Canadian government on 13 October. Canada agreed to provide up to one million dollars for the aircraft plant, which would belong to the Canadians but would be under Munitions Board management during the war. The British government was to agree to keep the factory supplied with aircraft orders until the war's end, and if a flying school were to be set up, it would be a British responsibility.

By this time, though, developments in France had presented an entirely new set of conditions. The RFC had been heavily engaged in

*Set up in late 1915, to facilitate the production in Canada of munitions and other war supplies for the British government. Headed and staffed mostly by Canadians, it was in effect a Canadian agency but reported directly to the British Ministry of Munitions.

the Battle of the Somme and had suffered its heaviest casualties thus far, resulting in a need for replacements. The British were becoming increasingly aware of the importance of the airplane in modern warfare and during the latter part of 1916 several increases in RFC squadron strength were authorized. The last of these came on 12 December when 20 new operational squadrons and 35 additional training squadrons were approved.

The requirement for additional



Before the RFC set up training schools in Canada, Canadians who wished to join the RFC or RNAS had to obtain their own pilot's licences. Here, Hugh Peck, of Montreal, learns to fly at the Thomas School, Ithaca, N.Y.

pilots and training facilities now was a matter of urgency, and things moved swiftly. The British War Office produced a plan for establishing 20 of the 35 new training squadrons in Canada, to be raised by a nucleus of officers and men sent from the UK. An advantage, it was pointed out, assuming that the proposal to set up an aircraft factory was sanctioned, would be a ready supply of aircraft for the training schools or squadrons. The

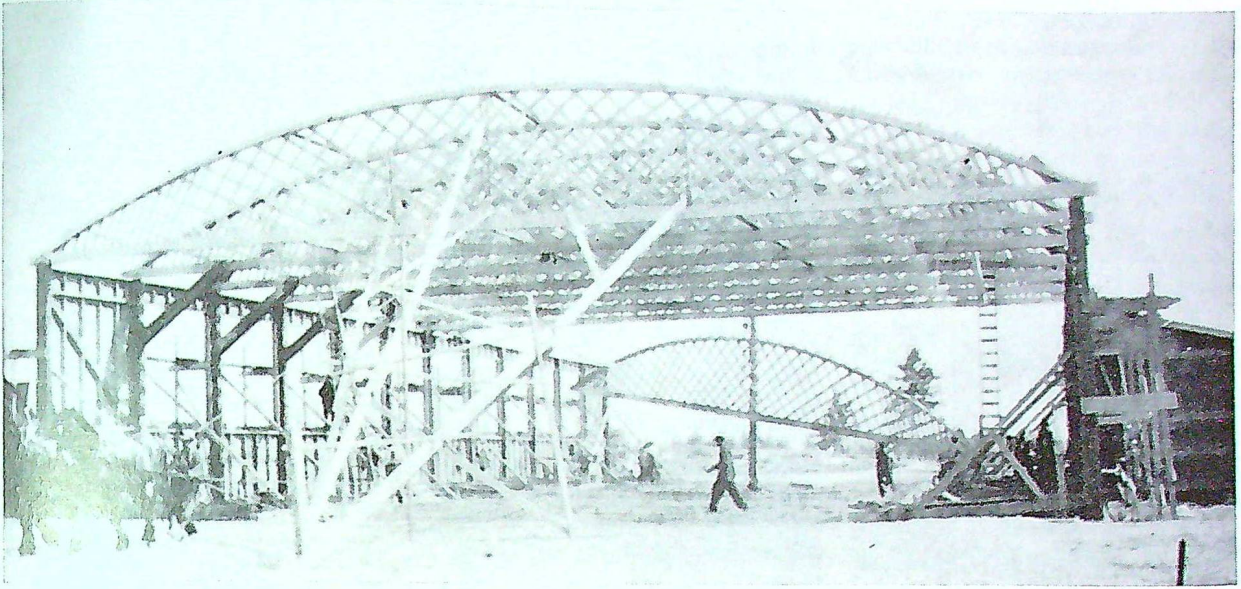
plan called for recruiting pupil pilots in Canada.

On 21 December details of the plan were worked out at Adastral House in London, the home of the recently-created Air Board. The meeting was attended by representatives of the various branches of the service, and it was decided that, with the agreed-upon co-operation and assistance of the Canadian government, the formation of Canadian training squadrons would be pushed with all possible speed, and that personnel to get the scheme going would be sent to Canada immediately.

Authorization was given for establishing recruiting offices in Canada, and it was decided that physical equipment, including aircraft, would be provided by the Imperial Munitions Board. The Board was also to be responsible for preparing aerodromes for the RFC in Canada. The agreement of the Canadian government was obtained to provide, on a repayment basis, food, clothing, gasoline and oil, medical services, and other facilities.

At the same time, matters were taking shape in Canada with regard to production of aircraft. Authority had been given the Imperial Munitions Board to place an order with a Canadian company for 200 Curtiss aircraft, and on 15 December the Board incorporated and organized a new company. Known as Canadian Aeroplanes Limited, the company was nominally a private enterprise but actually all its capital was owned by the Board. The Canadian government advanced the necessary capital on loan and the factory was held as an asset against Imperial funds.

The new company went ahead quickly with its plans. It bought out most of the assets of the Curtiss Aeroplanes and Motors Limited, including the rights to make the Curtiss JN-4 trainer in Canada. It also took over most of the staff of



The hangars at Camp Borden were constructed during the early part of 1917. These hangars are still in use today.

the Canadian Curtiss company, and part of the quarters that it had been occupying.

The JN-4 had been selected as the trainer for the RFC in Canada, and initially it was considered that the production of the factory would be limited largely to RFC Canada requirements. It developed that the company was to go far beyond this in total number of aircraft produced, and was to make in addition, other types.

The advance party, totalling 14 officers and 76 other ranks, and with 15 motor vehicles, sailed from Britain on four ships between 9 and 18 January, 1917. It was headed by Lt.-Col. C. G. Hoare, 39th Central India Horse and RFC, who had been appointed to command the RFC in Canada. He was to remain in command throughout the whole of its active period, and before returning to Britain was to rise to the rank of brigadier-general, commanding a force of nearly 12,000. Hoare was no armchair flyer. He had flown in France during the very early days

of the war and during 1916 had been given command of a wing.

Hoare landed in Saint John, N.B. on 19 January and proceeded directly to Ottawa, where he met senior officials of the Militia Department, the Imperial Munitions Board, and other agencies. On 25 January he went to Toronto, which had been chosen as the headquarters site for the RFC Canada. Even with due regard for the limitations of the aircraft and equipment of 1917 it is interesting to note that the belief was held that "generally speaking Ontario is the only Province in Canada suitable for military aerodromes". Temporary headquarters space was obtained in the Imperial Oil Buildings in downtown Toronto, and the RFC Canada was in business.

PLANS INTO ACTIONS

It was hoped that flying training might begin by 1 April, but there was much to do. There was only one real aerodrome in the whole country, that at nearby Long Branch on the Toronto outskirts, but it was too

small to serve as a major field. Personnel had to be recruited and aircraft obtained.

The RFC Canada commander's first job was to select sites for his fields. Plans called for four stations, each with five training squadrons. Each station would consist of one or more aerodromes which must be built, complete with facilities for the men and machines.

On 26 January, the day after arriving in Toronto, Hoare set out to look at Camp Borden, which had been suggested as the site for his first station. The 70-mile journey was made in below-zero temperatures and over snow-covered terrain. Hoare was accompanied by Maj.-Gen. W. A. Logie, general officer commanding Military District No. 2, and by several other officers, and when they reached Angus they found the branch railway line to Borden closed for the winter. The party had to break trail by sleigh and it took nearly two hours to cover the five miles in from the rail line. As they made their slow passage through

A Canadian army medical officer checks the reactions of a fledgling pilot after spinning him in a revolving chair.

the snow, muffled against the cold, Hoare must have thought back to his service in warmer and sunnier climes, possibly with inward queries about the whole business.

In the circumstances he was not too impressed by what he saw when he arrived. It was hard to tell, through the snow, how flat much of the area really was although a good deal of it was covered with stumps. Furthermore, he had heard that the whole district had a "very bad reputation for sandstorms". However, on the advice of Maj.-Gen. Logie, who gave Hoare much assistance, he decided to accept the site for his first aerodrome.

It had, undoubtedly, many advantages. The land belonged to the Canadian government, which offered it rent-free to the RFC. In addition, several important and costly facilities were already available. A sanitation system, power plant, water supply and railway siding had been installed for the 32,000 troops of the Canadian Expeditionary Force who had been camped there in 1916.

In a sense that cold, wintry day of 26 January 1917 can be regarded as the birthday — or possibly the date of conception — of what was in time to become the ranking air station of the RCAF, where so many of today's very senior air force officers earned their wings. Today, Borden has had its wings clipped, but it stands as one of the RCAF's major ground training establishments, and the tradition carries on.

Having made his decision, Hoare returned to Toronto and wrote several letters to Maj.-Gen. Willoughby Gwatkin, chief of the general staff in Ottawa. A great deal of correspondence was to pass between the two before Hoare returned to



Britain, and Gwatkin himself was to become Canada's first air vice marshal and Inspector-General of the Canadian Air Force of the early 20's.

Hoare explained that he wished to begin recruiting immediately and asked if accommodation in the Toronto area for 1,000 men could be placed at his disposal. He also wanted personal clothing and "regimental necessities" for his recruits, and asked whether the Canadian Militia could provide medical and dental facilities for his force, and medical examinations for recruits at points across Canada. Gwatkin was able to meet all of the requests.

The Imperial Munitions Board, the construction and purchasing agency for the RFC Canada, obtained permission from the Militia Department to proceed with construction and other work at Borden and contracts were let.

BUILDING STARTS AT BORDEN

From here on things moved rapidly. The contracts for the work at Borden were signed on 27 January and eight days later the rail-

way line into the camp had been re-opened and a force of 400 was at work in sub-zero weather, clearing stumps from the ground and preparing the area for construction. A week later 1,700 men were on the job, working through the nights under the light of arc lamps. Six weeks after Hoare had inspected the area, most of the 15 hangars called for had been finished and enough other accommodation was ready to permit the first training squadron to form there and start putting together its aircraft. The initial project for the camp was finished on 2 June. Despite the hectic pace of the work, they must have built well, for most of the 15 hangars put up for the RFC Canada are still standing and in use by today's RCAF at Camp Borden, 45 years later!

During that four-month period 57 buildings were erected, 850 acres were cleared of stumps, levelled and sown with grass seed, nearly five miles of asphalt road was built, and additional sewage pipes and railway lines were put down. Also, an electrical system was installed and

telephone communication with Toronto and neighboring towns was established.

Even before construction had started at Borden, a great deal had been accomplished in connection with other sites and procurement of supplies and equipment. On 27 January arrangements were made for the RFC Canada to use the Long Branch field. Within a few days still additional sites had been inspected and procured, at Leaside and Armour Heights, on the then Toronto northern outskirts, and at Rathbun and Mohawk, 130 miles to the east, near Deseronto. Also, a contract was signed for the building of a million dollar aircraft plant to house the works of Canadian Aeroplanes Limited, and actual construction began before the month's end. Meantime, construction of JN-4s was underway at temporary quarters.

RECRUITING BEGINS

In late January Gwatkin had advised Hoare that the Canadian Director-General of National Service was ready to help the RFC to recruit personnel, and asked for details. Hoare replied that apart from the cadets who would be recruited for flying training, the Corps would need some 3,000 skilled ground personnel to form the full complement of the 20 training squadrons and other supporting units. Twenty-five trades would be needed, and engine fitters and riggers were required in the largest numbers. Enlistments would be for the war's duration, and while the men's services would most likely be needed only in Canada, recruits for ground positions must agree to go overseas if necessary.

A Recruits' Depot was formed 5 February and was accommodated in the Toronto Givens Street School, and recruiting began. It appeared that, initially at any rate, enough

cadets for flying training would be readily available. The recruiting of ground tradesmen was another matter, however, as the RFC had to contend with the lure of high wages being paid to skilled workers in the munitions factories, the fact that there was no organized recruiting system throughout Canada, and the problem of transporting potential recruits for long distances before they could be interviewed and medically examined.

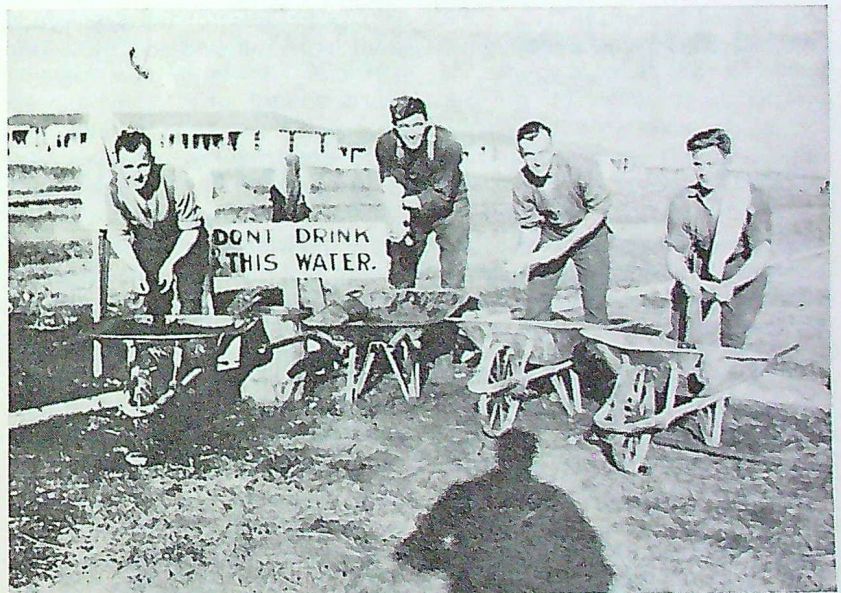
Recruiting offices, with facilities for giving trade tests, were opened in Toronto and Hamilton (the Hamilton office was later closed), and branch offices were opened in Montreal, Winnipeg and Vancouver. Medical boards, placed at RFC disposal by the Militia Department, examined prospective recruits.

The RFC Canada turned its hand to publicity in its drive for recruits, both ground tradesmen and cadets for flying training. Display advertising space in the large daily newspapers was bought, and the classified columns were also used. Billboard advertising was also used at first but its cost was found to be too high and it was dropped. Public

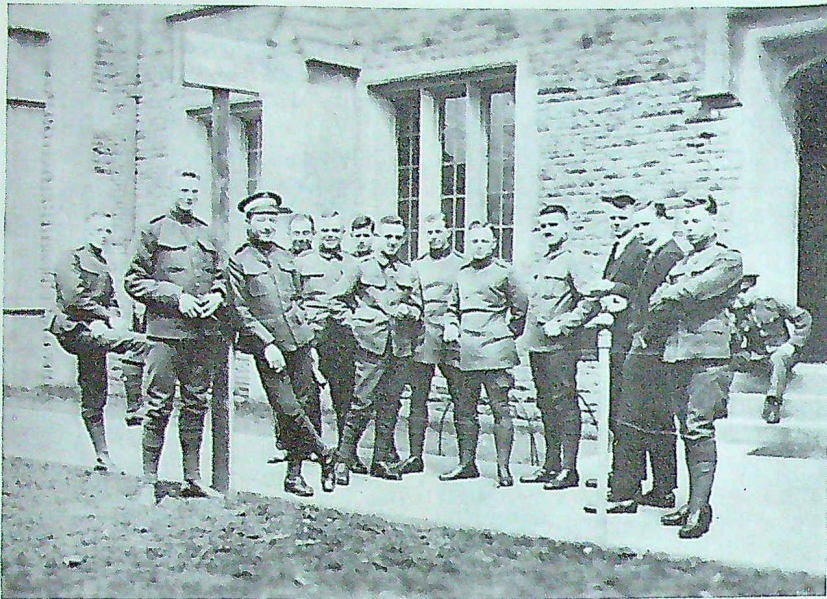
talks and meetings were arranged and skilled workers were circularized with printed material. The RFC Canada was disappointed in the results of paid advertising and found that news and feature stories dealing with aviation and containing some recruiting information "always brought results". The purchase of display advertising space was continued, though, because it "served to stimulate the interest of the newspaper, and thereby helped in the placing of news items".

The RFC Canada received much aid from civilian recruiting committees which were formed throughout the country, and from the Department of Militia. Despite the many problems, more than 7,400 Canadians were enlisted for ground duties with the RFC in this country during the period of the training scheme.

Recruiting of cadets for pilot training was easier, although there were some problems. The RFC received 1,000 applications during the first few weeks of recruiting, although not all, of course, were acceptable. Before the RFC established itself in Canada the public generally



Four members of the RFC clean vegetables under make-shift circumstances.



A group of cadets lounge outside Burwash Hall Toronto, April 1917. Note the aircrew "white flash" on the cadet third from left.

civilian clothes which were packed and sent to his home address.

The RFC equivalent of "private" or, in modern RCAF terminology, "aircraftman", was "mechanic". All ground tradesmen initially held this rank and, until promoted to corporal rank, were known as "mechanics", regardless of whether they were cooks, carpenters, clerks, or actual engine mechanics in the modern sense.

As regards the cadets, the job of the RFC was to teach them more than how to fly. A Cadet Wing, where the fledgling pilots would receive ground instruction before going on to a training squadron to learn to fly, was being set up. As the scope and thoroughness of the training later increased, still more ground schools were to be formed. Cadets were later to pass through the Recruits' Depot, as did mechanics. At first, though, cadets went directly to the Cadet Wing or, before the wing was formed, to accommodation made available by the University of Toronto.

The main job of the RFC, though, was flying, and it wasted little time in putting its first group of cadets into the air, capitalizing on the speed with which events had moved.

(to be continued)

understood, not without some reason, that it was difficult to join up as a pilot and that it was also a costly business. The RFC had to work hard to put the point across that training was free, and that there was no expense involved for the young man who wanted to learn to fly.

The first groundcrew recruits ar-

rived at the newly-formed Recruits' Depot and as the flow increased additional quarters were obtained. The recruits received their final medical examination at the depot and were then given regimental numbers as members of the RFC. Service dress and other items of kit were issued and the recruit said goodbye to his

LINGUISTIC LEGEND

Thirty six percent of those now serving in the RCAF speak two or more languages. A recent AFHQ survey reveals that the "extra languages", besides English, total more than 50 — ranging (in alphabetical order) from Afrikaans to Zulu.

The survey shows the numbers, by rank, who claim another language and a "degree of fluency" code indicates the person's ability as fluent, working or limited. Of the 18,299 total, 12,560 (or approximately one in four RCAF members) speak French — half of them fluently.

Other languages spoken by RCAF members include:

German
Spanish
Italian

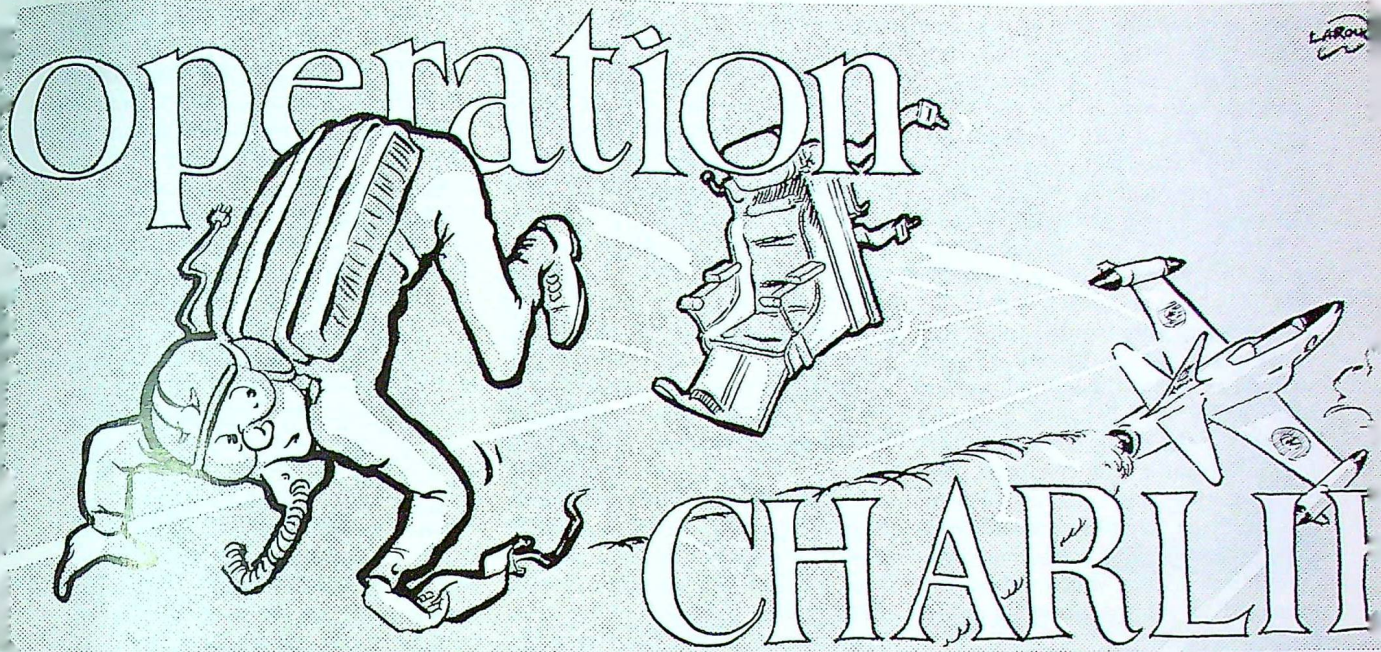
Dutch
Latin
Swedish

Greek
Hungarian
Finnish

Danish
Malayan
Japanese

Chinese
Norwegian
Afrikaans
Icelandic
Czechoslovakian
Slavacroat
Serbian
Yugoslavian
Ukrainian
Russian
Polish
Pakistani
Hindu
Hindi
Undur
Chawar
Pushtu
Punjabi

Swahili
N.A. Indian
Flemish
Gaelic
Turkish
Rumanian
Hebrew
Yiddish
Lithuanian
Maltese
Portuguese
Burmese
Eskimo
Latvian
Armenian
Arabic
Estonian
Zulu



By SERGEANT P. N. ELLIS

Reprinted from VOXAIR

(In ever-increasing numbers dedicated RCAF airmen are voluntarily training in land search units so they can render assistance to downed fliers, either military or civilian, whenever required. At present there are 27 RCAF stations, units or detachments with volunteer ground search parties. The following fictional article is an account of a typical ground search carried out by these volunteers . . . Editor).

ACCORDING to the "metman" the ceiling was 700 feet, visibility three miles in light snow, temperature 28 degrees with visibility expected to drop around 1030 hrs. to one mile in blowing snow. As Charlie headed out to his faithful "T-bird" he hadn't a care in the world. He happily ran through his mind the procedure he would follow on the

flight; aerobatics, then an ADF with a GCA full stop, which should bring him back in time for lunch.

Minutes later the T-33 was climbing away to altitude. "Boy, this is living," Charlie mused. "Nice blue sky, smooth, warm, back to cruise, just sit back and relax. I had better check my parrot with Stargazer to see if the boys are painting me on their radar scopes. Parrot is squawking sweet and a point of 60 miles northeast of base."

The T-33 is a proven aircraft. It has been flown thousands of hours and has trained many hundreds of air force pilots. But, any man-made machine is subject to failure at one time or another. For Charlie's machine that time was at hand. The first warning came with a strong vibration followed by a muffled roar. The fire warning light came on and the RPM indicator began to fluctu-

ate. A quick glance in the rear view mirror revealed smoke pouring out of the engine section. It was time to go.

Everything worked with precision, the canopy blew off, the seat ejected, the lap belt came apart allowing Charlie to drop clear of the seat and at the proper time, the chute automatically opened. There was only one thing wrong, Charlie had neglected to strap on his seat pack. This oversight greatly complicated his problem since the seat pack contained all his survival gear with its nice warm sleeping bag and SARAH* transmitter.

Stargazer had picked up the emergency squawk initiated by the ejection and also an indication of chaff returns from a chute opening. Sector Control was notifying home plate and Rescue Co-ordination Centre, *Search And Rescue And Homing.

after a communication check, had established that an aircraft was down and alerted pararescue and stand-by personnel. Co-ordinates were re-checked with Stargazer and 45 minutes after bail-out a SARAH Dakota was on its way to the area. Operation Charlie was under way.

With the low ceiling, radar vectored the *Dak* to the area at 4000 feet. The rescue aircraft would do its sweeps at this altitude for better radio reception. A second aircraft would creep into the area under the low ceiling and attempt a visual search for the crash scene or pilot.

Charlie had really hit hard. He couldn't move his right leg or arm and his back felt like someone was working on it with a hammer and cold-chisel. After much effort he managed to get the chute wrapped around himself.

Radar and RCC had agreed that from IFF chaff return, and considering the wind, the pilot should have landed not far south of his bailout area.

SEARCHERS SENT

The ceiling in the search area was 1200 feet above ground level but forward vis. was restricted in light

snow. The visual aircraft was interested in finding the crash scene so that it could start a search in the most probable area. The smoldering wreckage of the T-bird was found 15 minutes after arrival, so the SARAH-equipped *Dak* was requested to do a cloud breaking procedure and help in the visual search. The two *Daks* had been unable to make radio contact with the downed pilot, nor had they sighted any fires or a chute. Ground search was dispatched immediately.

During the standby period ground searchers had checked their equipment to confirm a state of readiness, and while the two *Otters* were flying them in they did a re-check. Each searcher's pack contained a ground sheet, sleeping bag, complete change of clothing, personal gear, extra boots, insoles, mits, socks, axe, compass, knife, matches, whistle, mirror, mess kit, pyros, signal panel, flashlight, and a small first aid kit. The ground search leader and his deputy went through a check list of base camp requirements. Five in One rations until fresh ones could be flown in, tents, extra sleeping bags, cooking equipment, stoves for heating, coleman lanterns, fuel, chain

saw, pyros, radios, medical supplies, toboggan, stretcher, skis, ropes, etc. . . . were all checked as being aboard the two *Otters*. The ground search leader re-checked his pack again to confirm that he had the one mile to one inch maps, and also the enlarged grid map of one quarter mile to one inch. Photos were not available of the terrain but the topo maps showed it as being fairly level with bush coverage. The radios were with the equipment and a list of all personnel had been made. Radio contact between the *Daks* and *Otters* was established and still no find was effected. Two pararescuers had jumped into the crash scene and confirmed the absence of a seat while the other two dropped onto a frozen lake three miles south to ensure that the ice was safe for a landing. Prior to landing the two *Otters* flew over the crash scene and the area to be searched to familiarize the ground search people with the terrain.

Hot Shot Charlie was far from being hot, in fact, he was mighty cold. He thought to himself, "What's the use of yelling, they can't hear me up there. Save your strength, you might need it the way things are



shaping up. Why can't the clots see me? I can see them, and they have flown right over me twice."

The pararescue jumpers at the crash scene had set a compass course to the frozen lake, blazing a trail as they went. This blaze could be used for the ground search personnel when proceeding to the crash. The jumpers reported a search vis. of 50 feet.

While search personnel unloaded the *Otters* the other parajumpers helped the ground search leader and his deputy check the grid layout for the search. The search area was to be a block three miles long by one mile wide. Its length would lie in a direction south from the crash, one half mile either side of a designated centerline, which was the last radar track of the aircraft. The winds were from the north five to ten miles per hour. Therefore, if the aircraft had gone straight in after ejection, a chute descending from 13,000 feet should have landed somewhere in an area one and a half miles to two miles south of the crash.

RCC, who were being kept in the picture by radio messages relayed by one of the *Daks*, requested that the two *Otters* return immediately for more searchers. The lack of SARAH transmissions, a fire, or some visual indication meant, that although the chute had opened, the pilot was probably injured. As the temperature was dropping it was doubtful that he could stand an over-night outing.

The *Otters* were preparing for take-off when the jumpers cutting cross-country radioed that they had found the ejected seat. This was a million to one find, and it meant that the aircraft had gone straight in after ejection. This indicated that the search area had been laid out properly. The seat find was marked on the grid map and it was found to be 16 tallies north-northeast of base camp.



You might wonder, "What is meant by search vis of 50 feet, also what are tallies, and how do you control a group search in the bush?"

When travelling in the bush you might be able to see 300 feet in any direction from a standing position, but if there are a lot of dead falls, stumps, etc., the effective searching vis for an object could range from 20 to 300 feet. The size of the object being looked for, and the terrain govern the effectiveness of the search visibility. For example, when searching for a small child in dense underbrush the vis could be as low as 10 feet. Children have a tendency to crawl under a fallen tree or into a crevice to obtain a feeling of protectiveness. If the object is large, such as an aircraft, then the search vis might be as far as a person can see. The 50-foot visibility reported by the jumpers was based on their bush lore and a comparison of the seat size to that of a person.

It is not feasible to carry a tape measure to determine distance travelled in the bush, so a very simple and accurate means of measurement is used. When two steps have been taken it is known as a pace (approximately five feet). Sixty-six of

these paces is a tally, and 16 tallies equal one mile. The tallies are kept track of by tying knots in a piece of string or by transferring stones or twigs from one pocket to another.

For control of personnel a basic sweep line is used. Personnel are lined up with the dressing depending upon the direction of travel and the spacing determined by the search vis. In this case the vis was 50 feet so the spacing would be 100 feet. The end men are known as flankers, blazers, or pivot men. If the dressing is from the right then the men are numbered from the right to give them their position for the search. Normally a sweep line does not consist of more than 10 men. This insures complete control of personnel and thorough coverage of area searched.

During the first leg of the search the party moves on the number one flanker, advancing in line abreast. The number two flanker blazes a trail so that when the party comes to the end of the leg they can pivot about the number two flanker and proceed in the opposite direction. On this second leg the number one flanker blazes a trail to guide them on the third leg. This procedure is

repeated until the search area has been completely covered.

With the finding of the seat, which was a mile from base camp, a more accurate and smaller area could be covered. The block area to be covered could now start from the seat find position. One of the *Daks* returned for fuel so that complete air coverage could be maintained and directions given to the ground party during the re-fueling of the other *Dak*.

REINFORCEMENT ARRIVES

The search personnel were just lining up for the start of the search when the *Dak* advised that the *Otters* were on their way to base camp with 10 more searchers and fresh rations. Two sweeps had been covered and the time was now 1500 hours local. The *Otters* had landed and party number two was on its way to base line to commence searching the west half of the area. Just as they were about ready to start their sweep, party number one called and informed them that the seat pack had been found. In one sense this was good news as it indicated that the search layout followed the correct direction, from crash to seat and then to seat pack. The straps on the seat pack were not broken so how did it get separated from Charlie? This question and the fact that the temperature had dropped created greater urgency.

The seat pack explained the reason for no SARAH transmissions and it also meant that Charlie had no survival equipment. In one more hour it would be dark. The grid map with the finds marked indicated that the pilot should be a little more to the east of centreline. Number two party was already on its way to join forces with party number one. The aircrew personnel were happy to join in to increase the chances of a find before dark.

All 28 personnel were lined up abreast with vis reduced to 40 feet.



No ground search party was necessary for these two RCAF fliers when they were forced to bail-out of their crippled CF-101B over the rugged E.C. coastline, recently. Only four and one-half hours elapsed between abandoning the CF-101B and a happy re-union with their wives (l. to r.): F/L D. Broadbent, Mrs. Broadbent, Mrs. Bartlett and F/L V. Bartlett. The two fliers were flown to Comox by a US Coast Guard helicopter.

Pararescue, the ground leader, and the ground leader's deputy were placed in every fifth position for better control of the searchers. This was the final sweep and accuracy had to be maintained. The sky had started to clear which would give a few more minutes of daylight.

Not long after commencing the sweep the line started to take the form of a snake. A halt was called and the line straightened. With this amount of men it was going to be slow. Ten tallies had been covered and the line halted four times. There were six more tallies to go and it was getting dark.

Charlie was trying desperately to stay awake. He was tired and the cold had seeped into his body. He was sure he would freeze to death if something didn't happen. The aircraft had been droning overhead for hours but Charlie hadn't been

able to move enough to attract attention. Why not just close his eyes and drop into a quiet sleep? Something kept nagging at his mind though and he thought, "Don't give up yet Charlie. Hey! Did I hear someone yell 'tally 15'."

"Hold the line, 26 has a find." This was yelled up the line, followed by "We've found him." Six searchers and the aircrew were to blaze a trail to camp, while the remaining searchers looked after Charlie. Four of the searchers were to return from base camp with the stretcher toboggan.

Charlie was barely able to walk. He was able to explain his injuries though, which was of great help. A check of his leg and right arm indicated no severe breaks. His back injury could be a disc or a break pressing on nerves. This could be the cause of his immobility. A

stretcher had been made from two poles and the outer shells of four parkas. Charlie was braced as well as possible, wrapped in a sleeping bag and then lashed to the stretcher.

RCC had been notified of the find and had requested the pilot be immediately evacuated if possible. Base camp advised that the searchers with the toboggan had left and that the *Otters* were ready for evacuation. Bush vis was 25 feet but with the aid of flashlights and tracks in the snow the blaze to camp was easily followed. Charlie was transferred to the toboggan and securely strapped in. Darkness was rapidly closing in but the weather had improved to a broken condition. It had stopped snowing and the temperature had levelled off at 10 degrees above zero.

The *Otter* pilots had decided to use their landing light for take-off rather than have a *Dak* drop a two


minute flare which might burn out at a critical point. Charlie, still strapped on the toboggan, was placed aboard an *Otter* and was accompanied by two pararescuers and three searchers. Five searchers and equipment were loaded aboard the other *Otter*, while the covering *Dak* waited to escort the *Otters* home.

The noise of the *Otters* taking off was drowned out by the roaring growl of the chain saw. The remaining men would have to wait until morning for pick-up and logs were being cut for the camp fire.

"Come and get it", was the yell. No second call was needed. Thick juicy steaks satisfied the ravenous appetites.

The sky had cleared and night had settled in. As the searchers sat around the camp fire, enjoying its warmth and gazing into its rippling

flames, looks of contentment lay across their faces. The ground search leader was proud of the effort and co-operation the men had put into the search. The monthly week-end practice trips over the last two years had paid off. Practice searches in heavy rain, river crossings which resulted in a soaking, fighting to get through willow bottoms on cross country nav trips, treks through deep snow which required rest periods every few minutes, living on five in one rations, sleeping out in the open in 30 degrees below zero; all these and other hardships were now forgotten.


As the men relaxed, a peaceful silence settled over the camp. The air was filled with the aromatic smell of the camp fire, brewing coffee, and pipe tobacco. What a night! It sure is great to be alive. I bet Charlie was thinking the same. 

WHAT, NO RUNWAY?



One of the latest British military aircraft, the Hawker P-1127 which was demonstrated at this year's Farnborough air show, has amazed observers, buyers and designers from all over the world. This revolutionary jet fighter opens up entirely new possibilities for military aircraft.

The P-1127 is a strike-reconnaissance aircraft with vertical takeoff and landing (VTOL) capabilities. At Farnborough it performed the traditional skills of the fighter aircraft, then came to a halt above the runway, hovered momentarily, then started to move backwards. It hung with its tail, then nose down. It moved smoothly up and down.

The distinctive marking on the tail represents the colours of Britain, Germany and the US, the three countries which are supporting the project. 



The RCAF Central Band with the parliament buildings and parliamentary library in the background.

CENTRAL BAND IN EUROPE

THE little park in the heart of London was packed with an attentive and appreciative audience. Music filled the air and provided a moment to remember. Members of the RCAF had returned to Lincoln's Inn Fields.

Lincoln's Inn Fields provided one of the highlights of the RCAF Central Band's recent European tour. It was "The Fields", one of the world's oldest and most famous centres of the legal profession, where the RCAF Overseas Headquarters stood for most of the war. During those dark days the morale of the local people was often boosted by the music of RCAF bands. Because of that wartime association, Lincoln's Inn Fields and the name

RCAF will always be coupled.

Following their performance at The Fields the RCAF Central Band, under the direction of F/O W. V. Boyce, gave a performance at Victoria Embankment Gardens, then journeyed to Nottingham Castle. At Nottingham an estimated 3,000 people gathered to hear the RCAF musicians, in spite of the inclement weather. The gate attendant at the castle stated that it was the first time that he had ever seen a queue there for a band concert.

The next evening the band entertained personnel of No. 30 AMB with a concert and dance. Two days later they boarded an aircraft for Orly airport in Paris. The band's first performance on the continent

was to provide music for a garden party at the Allied Air Forces Central Europe Inter-Allied Officers' Club at Fontainebleau. Later the same day the dance component of the band played for an all-ranks dance at Camp Guynemer and the following day 2,500 French citizens filled the Fontainebleau market square for a concert by the RCAF musicians. The next day the bandsmen travelled by bus to No. 2 Wing at Grostenquin.

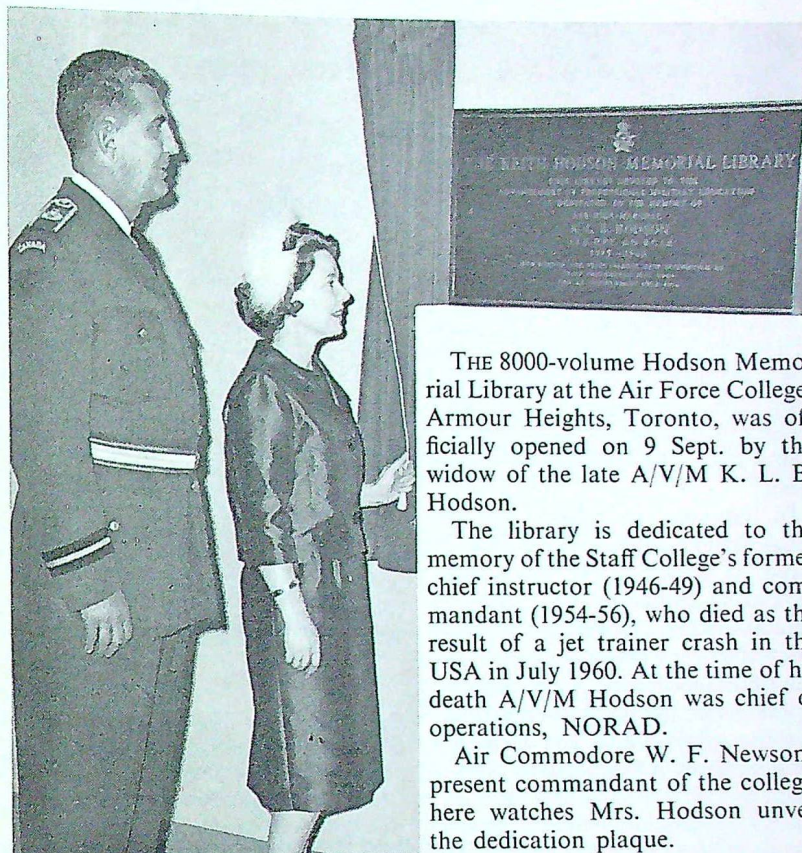
Keeping up their fast-moving pace, the band put on an afternoon concert at the Metz Military Hospital, then travelled to the tiny Grand Duchy of Luxembourg where they presented an evening concert at the Place d'Armes. On that occasion

the band played to one of its largest audiences: 4,000 people, including a pretty girl who presented a bouquet of flowers to a slightly-flustered bandmaster, much to the delight of the friendly crowd.

The following day the band provided a concert at No. 1 Air Division Headquarters in Metz. During their stay at Metz they also provided music for dances at various messes. At the Fête de la Mirabelle, an annual wine festival held in Metz, the Central Band headed the huge festival parade. Moving their activities to No. 2 Wing, the band played for their fellow RCAF members, then branched out to the local towns of St. Avold, Forbach and Sarreguemines.

With one week of engagements still to fill, the band crossed the international border between France and Germany, travelling by bus to No. 4 Wing where they played for an airmen's dance on the evening of their arrival. The next day they provided a concert at the renowned Kurhaus at Baden-Baden before the largest crowd (5,000 paid admissions) of the tour. Two concerts were next in line; the first, for RCAF personnel and dependants in the PMQ area and the second at Rastatt Schloss where 2,500 people listened as the band played before the beautiful old castle. The band then travelled to the ancient city of Buhl where they were the featured concert band at the famous plum festival. Having completed their playing engagements in Germany, they returned to France. Their itinerary included three concerts in as many French towns. One of these concerts was on the steps of the beautiful Verdun War Memorial. For a finale, the bandsmen gave a concert in the PMQ area of Marville, followed by a station dance in the recreation centre. Then they boarded a *Yukon* for Canada after a busy and most successful musical tour. ©

AIR FORCE COLLEGE LIBRARY



THE 8000-volume Hodson Memorial Library at the Air Force College, Armour Heights, Toronto, was officially opened on 9 Sept. by the widow of the late A/V/M K. L. B. Hodson.

The library is dedicated to the memory of the Staff College's former chief instructor (1946-49) and commandant (1954-56), who died as the result of a jet trainer crash in the USA in July 1960. At the time of his death A/V/M Hodson was chief of operations, NORAD.

Air Commodore W. F. Newsom, present commandant of the college, here watches Mrs. Hodson unveil the dedication plaque.

STARFIGHTERS NOW IN EUROPE

RCAF *Super Starfighters* are now being air-transported to Europe on a regular schedule by Air Transport Command.

The first of 200 Canadair-built CF-104s left Cartierville airport, outside Montreal, on 11 October. Final destination of the flight was No. 3 Fighter Wing, Zweibrucken, Germany, where the first of eight strike-reconnaissance squadrons will form.

The first CF-104 was rolled off the assembly line at Canadair Limited in March 1961. Since then the aircraft has been thoroughly test flown by the RCAF and a number are now in service at No. 6 Strike-Reconnaissance Operational Training Unit, Cold Lake, Alta.

The *Super Starfighter* will replace the F-86 *Sabre* in eight of the 12 squadron's of Canadas NATO Air Division. The four CF-100 squadrons will be disbanded on 1 Jan. 1963.

For the flight to Europe in an RCAF C-130B *Hercules* the CF-104 aircraft is partially dismantled. After a refuelling stop at Gander, Nfld., the flight is normally non-stop to Germany.

OPERATION JOHN CABOT

By AIR COMMODORE M. P. MARTYN

UNTIL the advent of World War II few Canadians were concerned about the affairs of "Britain's Oldest Colony", the island of Newfoundland and its adjacent Labrador Coast. However, with the onslaught of U-boat attacks in the autumn of 1941, the attention of those responsible for Western Atlantic area defence focused suddenly on this strategically desirable operational base.

In conjunction with increased naval activity, the air force was ordered to prosecute the aerial anti-submarine campaign with all possible despatch. Obviously, the rocky coast of eastern Newfoundland once more had loomed on the horizon as an important North American military feature, just as it had appeared long ago from a foggy sea to bright-



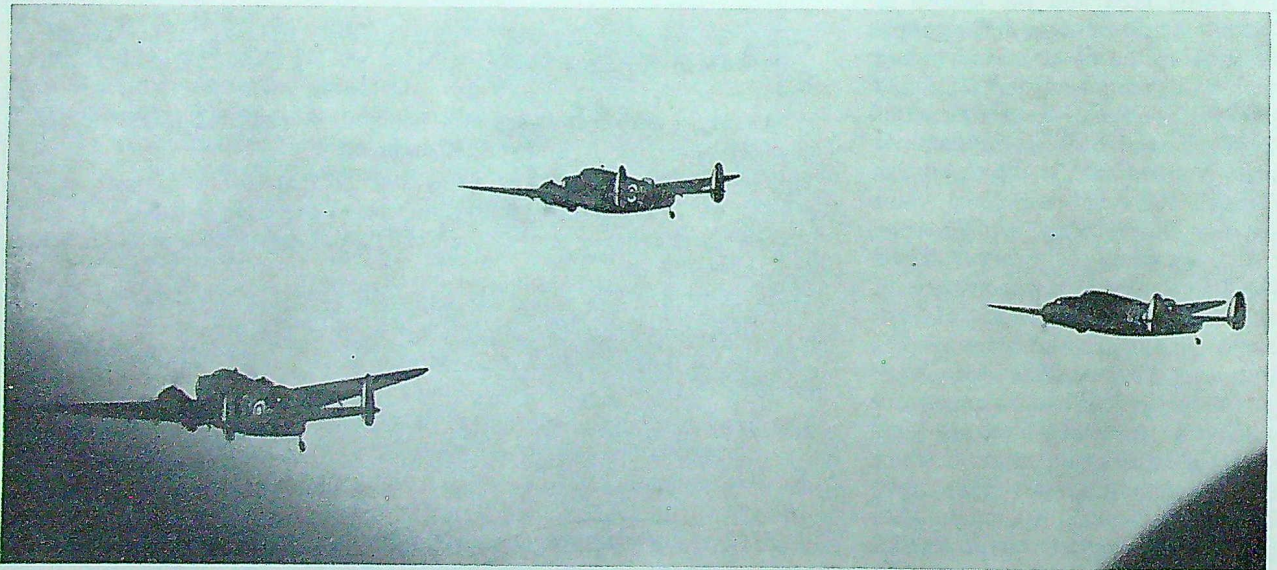
The detachment commander, S/L Martyn, takes a stroll along the tarmac in 1942.

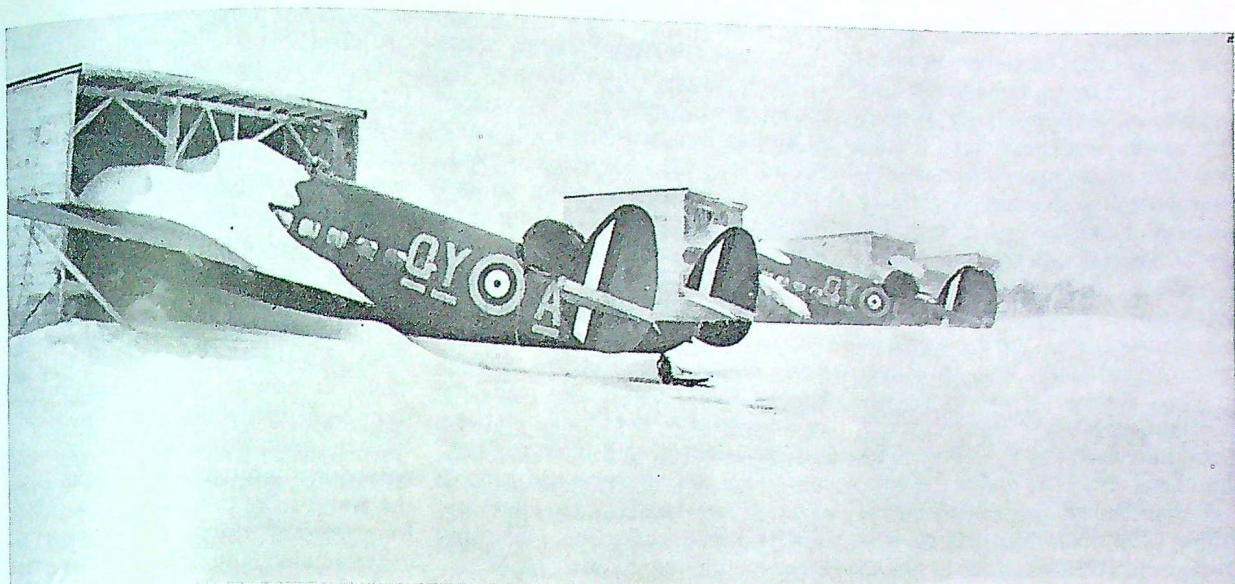
en the eye of John Cabot, master on the bridge of the "Mathiew".

This provided the background for a telephone call which I received one evening late in November 1941. I was advised I had been selected as the squadron leader to open a new anti-submarine air base on the Avalon Peninsula of Newfoundland. A hurried visit to Eastern Air Command Headquarters in Halifax revealed no known location on any maps of any airport in this part of the island. However, one was reported to be under construction "somewhere" north of the City of St. John's near Conception Bay.

The general area certainly bore an appropriate name but additional information of a technical nature would have been much more useful. The only available item was a con-

A solid cloud layer was typical Newfoundland weather.





Blowing snow, which clogged runways and covered aircraft, was a constant hazard in Newfoundland.

tractor's report to the effect that one runway of this mythical station was satisfactory, providing caution was exercised.

The flight of four *Hudsons* under my command, loaded to the cabin ceiling lights with all the gear deemed necessary for "detachments — starting of", was airborne from Dartmouth, N.S., at dawn the next morning, flying on a course that led into a somewhat weepy and "pink-eyed" sunrise.

After careful negotiation of a cold front, the accumulation of a moderate coating of light, clear ice and the passage of three hours of flying time, the rugged terrain of the Avalon Peninsula appeared below through fleeting gaps in the clouds. Thanks to the calculations of a conscientious navigator, the flight had no difficulty in picking up the small and weather beaten city of St. John's, crouched around its cliff-guarded harbour. An intensive low level search of the peninsula to the north was rewarded finally by the sighting of an orange-coloured wind sock, fastened to the top of a naked tree, at the edge of a

cleared area in the native scrub. This area, upon closer examination, turned out to be a partially finished runway.

The flight landed straight into a 40-knot wind laced with light, driving sleet. We then cautiously taxied the aircraft back along the runway to rendezvous with a group of assorted service officials who comprised the welcoming party. They

The author today



informed us that aerodrome facilities, in addition to the wind sock aforementioned, consisted of spare boxcar wheels from the Newfoundland Railway, strategically placed for tie-down purposes, accommodation and lumberjack-style messing for personnel in very temporary huts belonging to the runway contractor.

The first of many doubts now had been removed from our minds. We had found an aerodrome which officially didn't exist. It was called Torbay, after a nearby fishing village. All that was left for us to do was to put it into operational condition from scratch. Armed with authority to proceed as we saw fit, and assisted by a civilian foreman and several carpenters, we got to work.

In the four succeeding days the strength of the wind increased daily until it ultimately reached 70 knots. To impress us even more thoroughly with its capabilities, it blew harder at night than during the day. With every gust it brought blowing, penetrating snow which drifted over the wings and tail planes of our air-

craft until the fuselages squatted like giant cigars on the icy mounds.

Meanwhile, detachment personnel and the local carpenters, despite the barriers of vernacular and custom, worked with a will. Within 72 hours four small shacks formed a line of habitation behind the almost buried aircraft. Inside these wooden walls we carefully disposed our meagre equipment. Next came a combined workshop and armament building, a signals centre, an administration section and an operations room. Borrowed desks, workbenches and chairs filled the empty corners. Construction of temporary nose hangars followed. Then, with surprisingly little difficulty, the routine of an air force detachment was inaugurated — a small, snow-bound counterpart of hundreds of others scattered throughout the world in every clime.

Investigation of the station area brought to light three items of interest. In a small copse of frost-encrusted trees we found a shed carefully sheltering three large refrigerators, each labelled for a prospective mess. A chance snow bank

disgorged a number of large, black cooking ranges. Complete snow removal equipment was thoroughly hidden in a narrow track adjoining the dubious road which led to town.

The last find resulted in an immediate roll call of all personnel in order to discover those who had driven tractors on their fathers' farms, or those who had experience with motor trucks. From these men were selected the snow removal crews. Their instructions were to spend one day examining, starting and practice driving their vehicles, then open up the camp and keep it open. They tackled the job with initiative and enthusiasm. Thenceforward, on the slightest threat of snow, the air was filled with the roaring of motors and showers of ice and snow, interspersed with rocks and broken shear pins.

To ensure communications with the city of St. John's we next undertook to clear the main road of drifts. The first sortie went off in grand style, complete with a Sicard plume, until the lead plow driver met a farmer's sleigh travelling on the

"wrong side" of the road. In those days the traffic still followed the British system! Furthermore, the stubborn farmer refused to break the law by moving over and the plowman had no alternative but to move around him. This situation was repeated several times and the plowed road reflected the meetings with a series of jogs that had to be later explained to incredulous Canadians. All the snow removal equipment, of course, was fitted for a right-hand throw and a series of incidents and traffic complications consequently progressed throughout the winter. On their part the Newfoundlanders probably felt we were unreasonable and incompetent for always clearing the wrong side of the road first.

Despite such distractions, the station was soon functioning in a practical fashion on cleared roads and an open runway. The shovelling out of aircraft, by hand, met our SBX requirements.

We had to consider stocking fuel against our small heating requirement. An initial order for one-half ton of coal was placed with a local

The unit's first casualty occurred because there was no alternate airport.



St. John's dealer, and in the twilight a small open space was cleared in the snowdrift behind the detachment headquarters hut. Later that night the lights of the coal truck appeared at the site, and the driver enquired where he was to dump his load. We pointed out our small clearing with pride but it was abruptly turned down with "Not enough room". After fruitless discussion, the adjutant in desperation pointed off to the north in the darkness and said, "Dump it there."

The next morning it was obvious that more than one truck-load of coal had been dumped. In fact a steady stream of somewhat antiquated haulers was still busy dumping and this stream continued night and day for the better part of two

weeks. By that time we were the proud possessors of a small mountain of coal — some 4000 tons of it. Fortunately fate had guided the adjutant's finger that earlier night and pointed out a spot which was just clear of the flightway of a runway to be! The original half-ton order never did arrive.

To the awed citizens who lived close at hand, the new mountain proved to be a constant source of amazement and undoubtedly contributed indirectly to the success of the post-war negotiation for confederation with Canada. They must have felt that any nation that could spare all that coal at one time certainly was worth a partnership agreement.

The passage of a year saw RCAF

Station Torbay develop swiftly into a thriving and operationally competent unit, and its facilities were given wide recognition throughout Eastern Air Command. Even the meteorological section gained far renown as the only one in the world that could forecast and confirm dense fog in a 50-knot wind. From its runways eventually operated a substantial percentage of the aircraft which helped to guard the vital North Atlantic convoy route.

Today it serves not only as a key RCAF maritime base but also as the eastern continental terminal of Trans-Canada Airlines, and the airport for the capital city of Canada's newest and tenth province — St. John's, Newfoundland. ©

ONE OF A KIND

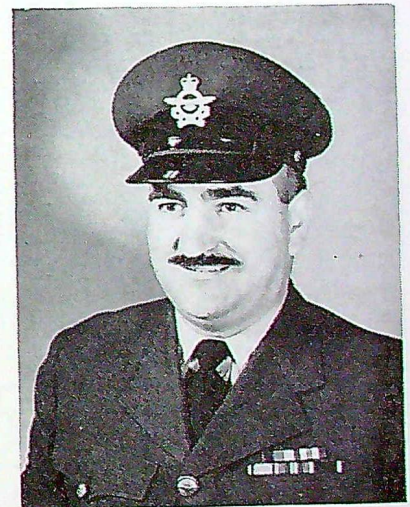
As he goes about his duties Corporal L. Humphrey, an air force policeman at No. 5 Supply Depot Moncton, appears no different than any other of the thousands of airmen who are doing a conscientious job for the RCAF. On glancing at his tunic, however, it can be seen that Cpl. Humphrey is "one of a kind".

On 19 October 1962, at an investiture at Government House in Ottawa, His Excellency Governor General Vanier presented Cpl. Humphrey with a medal designating him a Serving Brother in the Most Venerable Order of the Hospital of St. John of Jerusalem. Corporal Humphrey is the first RCAF corporal to be so honoured.

The citation covering Cpl. Humphrey's admission to the Order of St. John made mention of the fact that Corporal Humphrey had shown

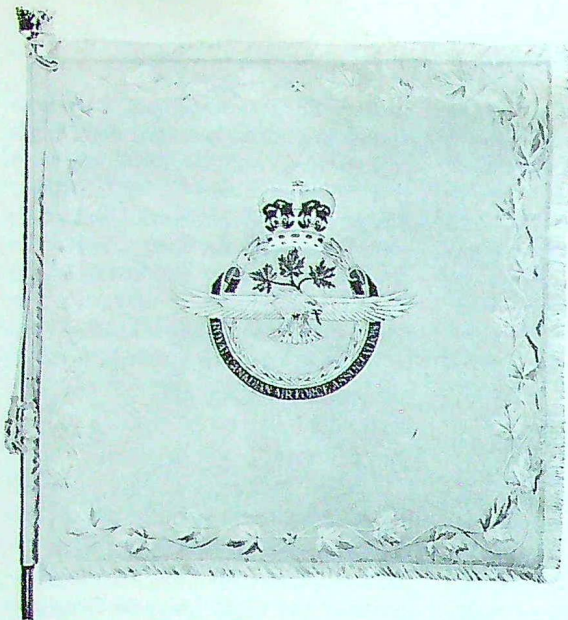
a whole hearted interest in St. John Ambulance first aid training for 24 years. This interest began in 1938 and continued throughout his careers as civilian, soldier, policeman and airman.

After his discharge from the army in England at the end of World War II, Cpl. Humphrey became a member of the Eastbourne Sussex police force and engaged in a number of St. John first aid competitions. He became the holder of certificate, medallion and an instructor's certificate. Since joining the RCAF in 1958 he gave unselfishly of his time and talent in instructing in first aid. At his present unit he has been instrumental in bringing to the attention of depot personnel the importance of care of the injured through the medium of first aid courses. ©



CPL. L. HUMPHREY

Awarded the Most Venerable Order of the Hospital of St. John of Jerusalem medal.



RCAF ASSOCIATION

12th Annual Convention Report

By FLIGHT LIEUTENANT E. E. BOYD
RCAF Directorate of Public Relations

THREE hundred delegates, representing 75 Royal Canadian Air Force Association wings from across Canada, converged at the Lord Nelson Hotel in Halifax on Wednesday, 27 September, to attend the Association's 12th Annual ("Blue-nose") Convention.

To get things underway, delegates were guests of A/V/M A. L. Morfee, CB, CBE, CD, and members of the host wings, Nos. 100 and 101, at a reception in the Officers' Mess at RCAF Anderson Square.

Highlight of the three-day convention, in which Mr. P. F. Connell, DFM, of Saint John, N.B., was elected national president for the 1962/63 term, was the presentation to the Association of its new banner. The presentation was made by the Hon. E. C. Plow, CBE, DSO, CD, lieutenant governor of Nova Scotia, on behalf of Her Majesty the Queen, to A/V/M F. G. Wait, CBE, CD, grand president of the Association.

Approved by the College of Arms and authorized by Her Majesty, the banner consists of the official RCAF badge on a background of tasseled sky-blue silk bordered with gold maple leaves (see above). The banner will be maintained at the RCAF national headquarters in

Ottawa, with duplicates being provided for each of the 75 wings.

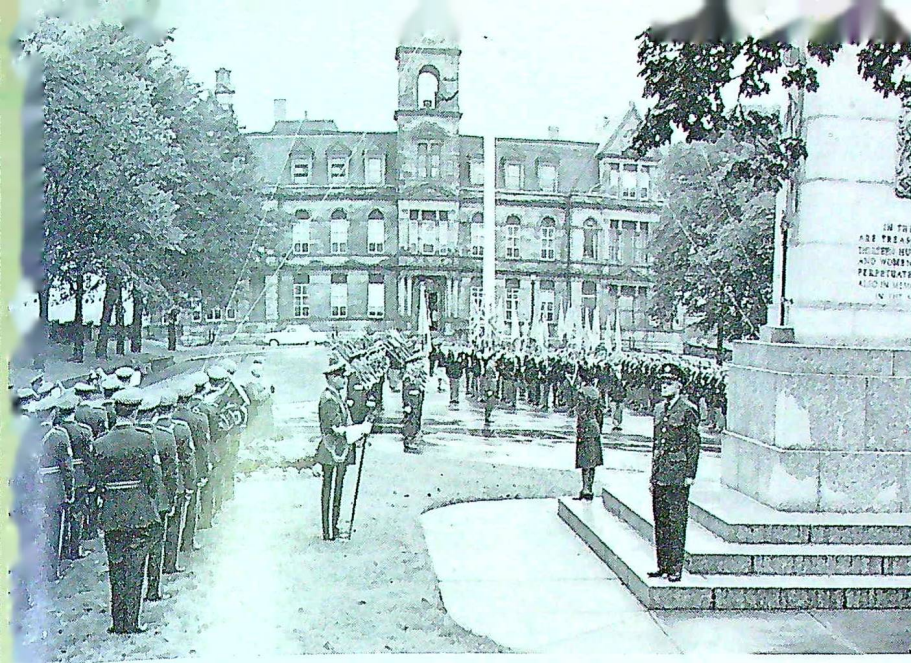
In delivering the keynote address on Thursday morning Mr. L. N. Baldock, the national president, stated that the RCAF is in fact a buffer between the service and the civilian population and stressed that the most important objective of the Association is, and must remain, 'to support the RCAF and all its components in every way possible'. He said that although Association members no longer wear the uniform, they are in effect the civilian auxil-

iary of the RCAF, with over 12,000 members across Canada.

Reviewing past accomplishments, Mr. Baldock said that in addition to carrying out its primary role, the Association was sponsoring 57 air cadet squadrons, maintaining an active 'bon voyage' program, carrying out a foster-parent plan in which they have adopted and now sponsor 43 children from less fortunate countries, and have representatives on all provincial committees of the RCAF Benevolent Fund. He stressed the need for educating the citizens

The newly elected national president of the association Mr. P. F. Connell shakes hands with Mr. L. N. Baldock, retiring national president.





Led by the RCAF Central Band and a guard of honour from RCAF Stn Greenwood, Association delegates paraded to and held a memorial service at Halifax cenotaph.

A/C G. G. Diamond, AFC, chief of personnel services at AFHQ and senior RCAFA liaison officer, lays a wreath.

The Hon. E. C. Plow, lieutenant governor of Nova Scotia (centre) presented the RCAFA banner, on behalf of Her Majesty the Queen to A/V/M F. G. Wait, grand president (third from right).



of the country in matters of aviation and submitted that the immediate task of the Association should be the implementation of a national project in aviation and aerospace education. One of the most successful projects ever carried out by the Association in this regard, he said, had been the sponsoring of the book, 'There Shall Be Wings', but this was in the past and no improvement can, he stated, be made by resting on our laurels. New means of carrying out the aims of the Association must be effected if the public is to be kept aware of the continuing advances in aviation and space technology.

The banner presentation ceremony, organized by F/L W. H. Morley of RCAF Air Transport Command, preceded a parade to the cenotaph and an impressive memorial service there. Wreaths were laid

in honour of those who gave their lives in the service of Canada.

Following the ceremony at the cenotaph the delegates were guests of His Worship Mayor J. E. Lloyd and the City of Halifax at a luncheon in the hotel. Mayor Lloyd expressed his welcome to the convention members and his fond wish that they enjoy their visit in his city.

On Thursday evening the delegates were treated to a lobster party at Hubbards, approximately 30 miles from Halifax.

On Friday morning A/C W. I. Clements, OBE, CD, air officer commanding Maritime Air Command, gave a comprehensive briefing on the roles and capabilities of his command. A/C Clements outlined aviation and its progress in the Maritimes from the flight of the *Silver Dart* in 1909 to the present. He explained the role of MAC and

the capabilities of the *Argus* and *Neptune* aircraft.

The Hon. R. L. Stanfield, premier of Nova Scotia, hosting a luncheon on behalf of the province on Friday, hoped that delegates would find time to see something of the province and also have the opportunity to renew old friendships.

On Friday afternoon the convention elected their national executive council for the coming term. The new council includes:

Grand President —

A/M W. A. Curtis, CB, CBE,
DSC, ED, Toronto

National President —

P. F. Connell, Saint John

First Vice President —

G. E. Penfold, Toronto

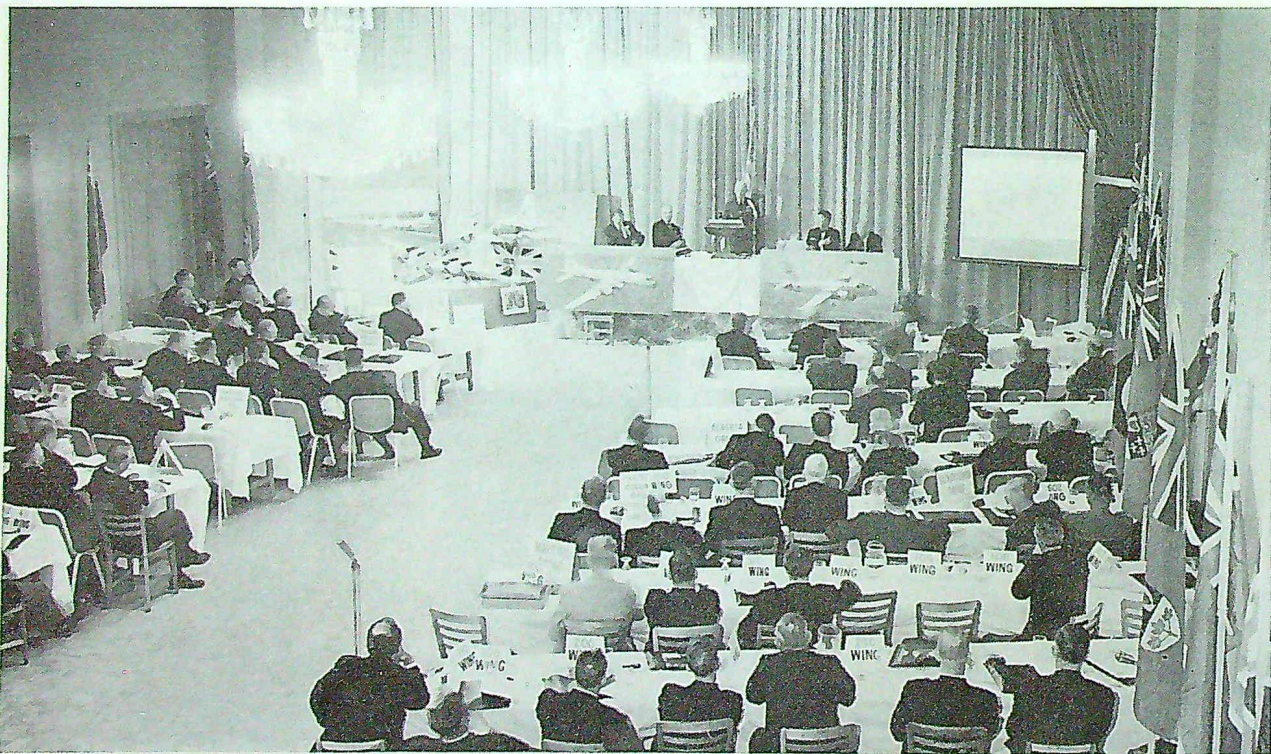
Second Vice President —

J. A. Cooper, Montreal

Third Vice President —

H. M. Bell, Winnipeg

A/C W. I. Clements, OBE, briefs the convention on the role of Maritime Air Command.



Fourth Vice President —
 L. E. Fulton, Montreal
 Chairman —
 A/V/M F. G. Wait, Ottawa
 Vice Chairman —
 G/C S. M. Sznuk, Ottawa
 Legal Adviser —
 G. A. Ault, QC, Ottawa
 Immediate Past President —
 L. N. Baldock, Windsor
 WD Representative (National) —
 Miss O. McBride, Montreal
 WD Representative (Eastern) —
 Miss K. Fortune, Saint John
 WD Representative (Central) —
 Mrs. E. Trail, Toronto
 WD Representative (Western) —
 Miss E. L. Frederickson, Winnipeg

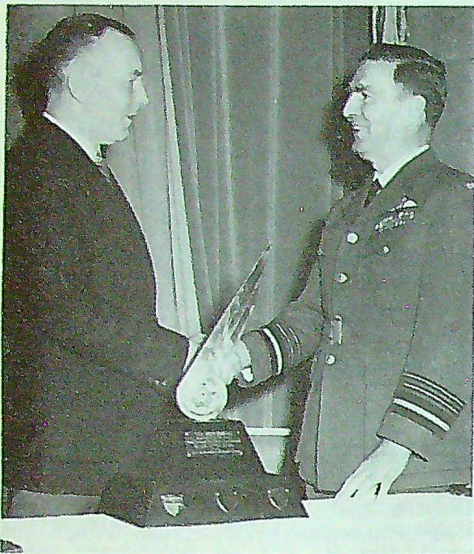


Air Marshal C. R. Dunlap, CBE, CD, chief of the air staff, in addressing the convention during their annual banquet on Friday evening, said it was most appropriate that his first public appearance since be-

L. to r.: A. L. Neiley, host wings' committee chairman; A/V/M F. G. Wait, grand president; A/V/M A. L. Morfee, honorary convention chairman; A/M W. A. Curtis, grand president-elect.

The new national executive council (back row, l. to r.): Mr. J. A. Bardsley, G/C G. M. Sznuk, A/V/M F. G. Wait, Mr. L. E. Fulton, Mr. F. A. Connolly, Mr. L. J. Schedlin, Mr. W. H. Clegg, Mr. R. A. Turner, Mr. W. H. Caverly, and Mr. G. Cattiny. (Centre row l. to r.): Mr. G. E. Penfold, A/M W. A. Curtis, Mr. P. F. Connell, Mr. L. N. Baldock and Mr. J. A. Cooper. (Front row l. to r.): Mr. G. A. Ault, Miss E. L. Frederickson, Mrs. E. Trail, Miss C. L. Fortune, Miss O. McBride, Mr. H. M. Bell, and Mr. R. D. White.





Air Marshal C. R. Dunlap, CBE, chief of the air staff, presents RCAFA annual awards. (left) Mr. A. Craig accepts the "Wing of the Year" award on behalf of No. 700 Wing Edmonton and (right) Mr. H. Bell receives the "Member of the Year" award.

coming CAS should be at the RCAFA convention for two reasons: firstly, his strong regard for the Association and its aims, and secondly, the fact that Nova Scotia was his home. During his address A/M Dunlap outlined the status of the RCAF today and its commitments in the defence of the free world.

On Friday evening the RCAF Central Band, as they had done at the more formal ceremonies, provided music for the social event of the convention, the 'Bluenose Ball'.

At the awards dinner on Saturday No. 700 Edmonton Wing was presented the trophy for 'Wing of the Year', and Mr. H. M. Bell of Winnipeg was presented the trophy for 'Man of the Year'. Many other presentations were made, most humorous and interesting of which was a mounted section of a horse presented by Edmonton Wing to Mr. A. L. Neily, chairman of the host wings' committee. Saturday evening Groups at Home 'Country Style' were held in the ballroom to

bring the 12th annual convention to a rousing conclusion.

During the convention many res-

olutions were passed and are being circulated to wings in minute form from national headquarters. ☉

Golden Hawks receive gold-plated mugs from the RCAFA. (L. to r.): S/L L. Hubbard holds both his own mug and that of W/C J. F. Allan, who was absent; F/L B. R. Campbell; F/L N. J. Carriock; F/L J. L. Frazer; F/L B. Lebars; F/L A. McDonald; F/L E. J. McKeogh; F/L G. Miller and F/L J. Giles.



TOTEM POLES UNLIMITED

THE carving of totem poles, for years a symbol of Indian culture in British Columbia, has been a dying art. Now, thanks to Chief Andy Frank of the Comox tribe and LAC R. A. Clarke of the RCAF, native craftsmanship and displays of Indian culture are about to experience a renaissance.

While stationed at Comox LAC Clarke, a telecommunications statistics clerk, decided to do something about the decline in culture and handicraft of the west coast Indians. He developed a friendship with Chief Frank and together they made plans for forming both a totem carving school and an Indian museum.

For more than a year the pair carried out an extensive campaign for funds for both these projects. They gave numerous talks to service clubs, church groups, youth movements, schools, women's organizations and historical societies. They organized meetings where they explained the significance of various Indian regalia and accoutrement and the reasons for lagging interest in Indian art. They put on a modified "potlatch" for local Boy Scouts during which a wiener roast was held and Indian dances were performed by Chief Frank and his granddaughter, Miss Florence Prince. Frank and Clarke also contacted various provincial and federal government agencies to appeal for assistance.

Chief Frank's and LAC Clarke's dedicated efforts were successful. One organization, the Fair Board, agreed to take on responsibility for the museum and negotiations are being undertaken for another interested group to do likewise for the totem carving school. If all goes well

and museum is actually built it will be well equipped as the National Museum in Ottawa has offered to lend, on permanent loan, 17 cases of artifacts. These items, such as masks, robes and rattles will be supplemented by others owned by Chief Frank.

Since the National Museum has stipulated that a warm, dry and fire-proof building must be provided for the artifacts, the Indian museum will have to be built to adhere to these requirements. The carving school, which will be constructed by the volunteer labour of Chief Frank, will have rough cedar boards for the walls and shakes for the roof in order to resemble the old style Indian log house as much as pos-

sible. When this building is completed Mr. Mungo Martin, internationally-famous Indian totem carver, intends to teach his art to the younger Indians. It is intended to construct the proposed museum in Centennial Park in Courtenay and the carving school in Comox on the Dyke Road Reserve.

LAC Clarke was posted to RCAF Station Chibougamau before the projects, for which he had worked so hard, were completed. But he has the satisfaction of knowing that there is a good possibility they will be carried out. Thus the Indians will acquire a new interest in their heritage, and at the same time create a new source of income from the revitalized art of totem pole carving.

Chief Andy Frank presented an eagle-design Indian sweater to LAC Bob Clarke as a farewell gift before the airman left Comox for his new station. Together they had worked for the revival of West Coast Indian arts and culture.



Letters to the Editor

TRI-SERVICE MEDICAL MUSEUM

Dear Sir:

We are pleased to announce that a Tri-Service Medical Museum has been opened at Canadian Forces Medical Service Training Centre, Camp Borden, Ontario. Most of the Museum pieces were inherited from the Royal Canadian Army Medical Corps School Museum, and consequently pertain to the Canadian Army Medical Corps and the Royal Canadian Army Medical Corps. Because of the large number of candidates from the three services who pass through our training centre (Vol. 14, No. 8, Oct. 62), we are extremely anxious to develop a truly tri-service museum.

With this thought in mind, I appeal to your readers for items of historical interest. Suggested items are uniforms and accoutre-

ments, worn by medical officers, historical records, photographs, medical instruments, and other paraphernalia of war, particularly those which pertain to medical operations in the RCAF.

All items will be gratefully acknowledged and the name of the donor will appear on each item in the museum; articles on loan will also be appreciated. They should be sent to:

The Curator,
Canadian Forces Medical Service
Museum,
Canadian Forces Medical Service
Training Centre
Camp Borden Ont.

I would like to take this opportunity to once again thank the many readers of your magazine who donated articles to the

RCAMC School Museum, and extend a cordial invitation to visit our new museum at any time.

G/C I. H. Barclay,
Commandant, CFMS Training Centre,
Camp Borden, Ont.

RE THE ANSON

Dear Sir:

I am sure everyone enjoys the "Aircraft Album" series on the inside back cover of THE *ROUNDEL*. At the risk of adding constructive criticism, may I point out that not only did the Air Observation Schools operate the *Anson* (Vol. 14, No. 6, Jul-Aug 62) but No. 18 SFTS at Gimli, Manitoba, trained pilots on this aircraft in the years 1943 to 1945 inclusive.

The *Anson* flapped and it was cold in winter but it was rugged. What more can be asked of a pilot trainer? The writer survived a mid-air collision in an *Anson* MK2. The aircraft involved were a mess of tattered fabric, dangling control wires and flapping controls but both flew home to Gimli and achieved safe landings.

F/L J. G. Sloan,
Resident Staff Officer,
102 McGill University Squadron,
Montreal, Que.

M.R.E.S. RE-UNIONS

Dear Sir:

The Missing Research and Enquiry Service of the Commonwealth Air Forces was established in 1945 to collect information on World War II casualties. By November 1948 more than half of the 42,000 missing had been located and MRES teams were working in widely scattered areas of the globe.

You may be interested to know that annual re-unions are held by former officers of this service, simultaneously in London, Ottawa, Sydney and Wellington. The objective is to maintain and cement the friendships formed between RAF members and their Commonwealth colleagues.

I would very much like to hear from any of your readers who were associated with MRES and would be grateful if you would publish my address.

P. E. Laughton-Bramley,
"Haldon," Nightingale Ave.,
West Horsley, Nr. Leatherhead,
Surrey, England.

MARKED MATES

That's a mighty accomplished girl Ben plans to marry. She can swim, ride, dance, drive a car and pilot a plane. A real all-round girl. They should get along fine. Ben is a good cook.

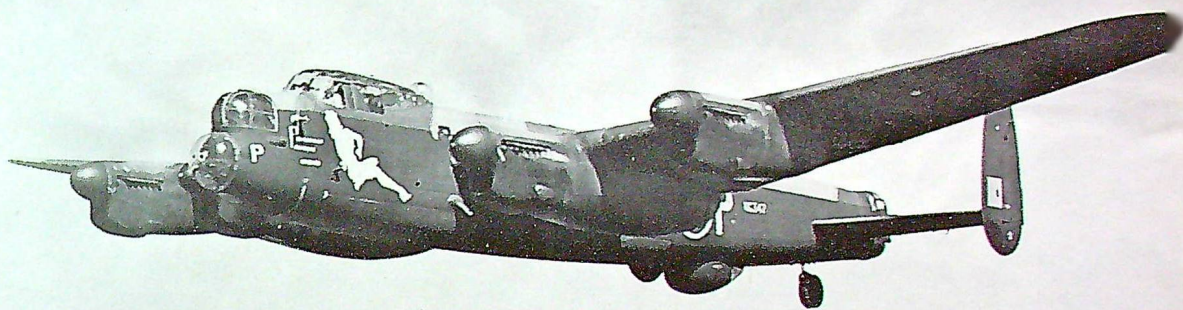
On the Line

by LAROUCHE
62



"I GOT IT FILLED UP AT THE HANGAR... WHY?"

Aircraft Album: The Avro Lancaster



STILL flying with the RCAF (No. 408 Squadron), the *Lancaster* became the most famous of Britain's heavy bombers during World War II. Easy to fly, it was still capable of lifting increasing bomb loads, which were climaxed with the 22,000 pound "Grand Slams", the biggest bombs of the war. Ten Victoria Crosses were won by *Lancaster* crewmen, two of whom were Canadians (Mynarski and Bazelgette). Twelve RCAF squadrons flew the type on operations, beginning on the night of 2/3 August 1943 with No. 405 Squadron. Number 405 also

gave the Canadian-built *Lancaster* Mk. 10s their operational initiation when they flew the first Mk. 10, "Ruhr Express" to mark Berlin in November 1943. The same month this aircraft was sent to No. 419 Squadron, which became the first squadron in No. 6 Group to fly *Lancaster* 10s (but not the first in the group to fly *Lancaster*s. No. 426 Squadron used *Lancaster* 2s on 17/18 August 1943). A total of 7,378 *Lancaster*s were built, including 430 in Canada.

Roger Duhamel

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